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ABSTRACT

The Management, Administrative Profile System (MAPS) was developed to permit assessment of a college on three levels. The detailed discussion of each level is preceded by a general process model which identifies the specific instrumentation, available options, and the major action steps associated with a particular level of assessment. Level "A" reveals to management and/or administration the degree to which individuals, departments, or the college as a whole are involved in any particular program; it also embraces cost analysis. Level "B" has been designed to show the degree to which management, administration, faculty, and staff agree on work objectives and implementation. Level "C" is designed to guide the data gathering efforts of MAPS' users and enhance the application of systems analysis. The primary intent of MAPS is to provide timely, accurate information in sufficient quantity to enable appropriate action. It is primarily a descriptive rather than a prescriptive system. This document describes the program and guides implementation. Illustrations and instrumentation of the model are appended. (Author/MJK)

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THE MANAGEMENT, ADMINISTRATIVE PROFILE SYSTEM

Presented by
Valencia Community College

For
The Central Florida College's Needs
Assessment Consortia

April 26, 1974

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1. INTRODUCTION

The developed Management, Administrative Profile System permits the realistic assessment of three levels of abstraction. The detailed discussion of each level is preceded by a general process model which identifies the specific instrumentation, available options, and the major action steps associated with a particular level of assessment.

The primary intent of the Management, Administrative Profile System (MAPS) is to provide designated managers and administrators with timely, accurate information, in sufficient quantity to enable them to take appropriate problem-oriented action.

The MAPS is not a panacea. Rather, it is a systematic process for highlighting the strengths and weaknesses of institutions in a manner calculated to minimize individual threat. It is primarly a descriptive, as opposed to prescriptive, system. The manner in which MAPS is implemented is directly proportional to its value as a descriptive tool.

At this juncture it might well serve our purposes to define "level" of assessment as employed in this monograph. The term refers to broad categories of information which describe particular segments of the college. When these categories are brought together through analysis they form a complete management or administrative profile of the college, program, subprogram, or element. The term has no relationship to the institution's organizational hierarchy or to the degree of difficulty associated with implementation. In addition, design considerations dictate flexibility; hence, the developed levels

of applications afford the president alternatives. For instance, a problem dealing with costs would indicate a Level "A" assessment; or a suspected communications breakdown would indicate Level "B"; or consistent procedural errors might indicate Level "C". A problem of greater magnitude--such as collective bargaining--might indicate the preparation of a complete profile depicting work-loads, productivity levels, etc. Then the particular problems and the president's desires dictate how much or all of the Management, Administrative Profile System is used at any one time.

A. The Level "A" Assessment

The purpose of this assessment is to reveal to management and/or administration the degree to which individuals, departments, or the college, as a whole, is involved in the program areas adopted by the Florida State Department of Education. In addition, the using college will be able to ascertain relative costs pursuant to the degree of participation.

The scope of cost-coverage embraced by Level "A" entails much more than instructional costs, which to a great degree are currently available, as it permits the highlighting of those cost factors associated with report preparation (ADP or non-ADP), specific maintenance activities, formal and informal counseling, committee actions, and various clerical activities.

The execution of a Level "A" Assessment enhances the college's ability to respond to questions, such

as: What does he do besides teach "X" number of classes: What does that report cost? How many people/hours are we devoting to that program/sub-programs/element? How much are we spending for the filing and retrieving of papers/documents/reports? What is our productivity index for course/department/major area/degree in comparison with others? (These questions are intended to be indicative rather than inclusive).

B. The Level "B" Assessment

The instrumentation for executing this assessment procedure has been designed to reveal the degree to which management, administration, faculty, and staff are in agreement. The focus is on the manner in which the institution determines the work that should be done, the adequacy of the organizational pattern to accomplish the work, the adequacy and processes for financing the work, and what decisions are made by whom to complete the work.

C. The Level "C" Assessment

The instrumentation associated with Level "C" has been designed to guide the data gathering efforts of MAPS's users and enhance the application of systems analysis.

Figure 1-1 depicts one model of how the seven modules generated by the Needs Assessment Project could be integrated to guide management action on a continuing basis.

2. PROGRAM

A. Management and The Assessment Problem

1) The Management Cycle

Both the requirement for needs assessment and the process characterizing it are receiving increased attention across the nation, with state and federal legislation for funding providing a good deal of the initial impetus.

Numerous approaches have been utilized to determine educational needs, ranging from informal questioning of faculty and personnel as to what they think the needs are through development of formal questionnaires aimed at the institution's total constituency, and/or the gathering of emperical student performance data.

The identification of needs is basically a discrepancy analysis that facilitates management's ability to accurately describe the two polar positions of:

Where are we now?

Where should we be?

and thus specifies the measurable distance between the poles. It is crucial to the success of action designs that the data describing these poles be as valid and representative as possible.

The specification of action designed to move an organization toward zero discrepancy is more commonly referred to as the planning process. This

process demands top-level management involvement because the output, or product, will produce the goals, priorities, and objectives (GPO's) which, if achieved, will yield zero discrepancy.

Planning, within the context of this monograph, does not include the identification and sequencing of specific work activities necessary to the accomplishment of any particular GPO. Rather, it involves managerial action that directs at least the following take place:

Collection of relevant and timely data;

Consolidation and display of collected data in a manner conducive to managerial decision-making;

Concensus, to the extent possible, that the developed position statements accurately address the question of "where are we now?";

Matching of developed planning scenarios (information consolidated from various publics describing "where should we be?") with current position statements;

Analysis and written description of any discrepancy, or gap, between what is and what should be;

Identification of alternative sets of GPO's which will permit the achievement of zero discrepancy;

Identification of all controls and constraints

(social, economic, legal, political, technological, and environmental) that impact each set of GPO's; and

Selection of the most appropriate set of GPO's.

Of the eight steps identified, the essence of management planning is embodied in the last step and therefore, is the only one that should not be delegated.

Needless to say, the degree of success experienced by social institutions in executing the aforementioned eight steps has been contingent upon many variables.

It is precisely these situational variables that create problems for management practitioners in the accomplishment of management (as opposed to administrative) responsibilities. These management responsibilities are defined as:

Assessment. For purposes of clarity, this responsibility will be divided into two parts; internal and external:

a. Internal assessment focuses on the collection, aggregation, and reporting of information useful to management in determining "what is being done", "is it legal", "what does it cost", "how many people are involved", "who is available for special assignment."

b. External assessment focuses on students, the community (to include faculty and staff),

businesses, etc., that can serve as effective information inputs to the college for purposes of better defining the college's service role. Basically, internal assessment deals with resources; how they are being consumed and the pinpointing of surpluses. External assessment keeps management informed as to the changing needs of the community. Together they are indicators of what needs to be done and what management has at it's disposal to accomplish the job;

Planning. The selection from available alternatives of the most appropriate set of goals, priorities, and objectives given particular social, economic, legal, political, technological, and environmental impacts

Policy Development. The formal pinpointing of accountability and the establishment of a work environment conductive to achievement;

Communication. In addition to the normal definition ascribed to this term (e.g., bi-directional continuous flow of information), the requirement for identifying the most practical method of ensuring new or modified policy statements are, in fact, brought to the attention of governed personnel. This forces management consideration of impact, time-frames, and depending upon the magnitude, selection of the most appropriate training

or orientation vehicle. The bi-directional characteristic also includes various actions by management, e.g., review and approval of lower-level action plans, review and approval of budgets, requests for exception, etc.

Evaluation. Management has determined what should be accomplished in terms of broad GPO's; created a legal framework for change; communicated the reasons for change; and elicited cooperation through orientation/training sessions and involved operations-level people in the identification, sequencing, and budgeting of work activities for which they are accountable. Evaluation, then becomes merely a matter of determining the degree to which operations-level people achieved what was required.

The above responsibilities are cyclical in nature and can never be considered as final actions. Each cycle completion will result in the expansion of management's experience-base and, therefore, their individual and collective abilities to tailor the referenced generic management responsibilities to their management style and institutional climate.

In any organization, formal, informal, quasi-governmental or other, it is management's mandate to bring to fruition those major intended consequences that it has identified for itself. To this end, management must ensure that the organizational

structure is capable of responding to dynamic needs of the serviced clientele. Additionally, the perception of management, administration, faculty and staff as to what is required (GPO's) must be brought into congruence.

Basically, the need for management of administrative (distinct from management in that administration focuses on the day-to-day operational problems of programming, budgeting, organizing, staffing, controlling, accounting, and reporting) action is contingent upon the degree to which a determination can be made as to what is going on now and matching this against what should be taking place. The gap, if any, indicates the kind and amount of action needed--in effect, this is the matching of promises with actual (as distinct from perceived) performance.

The problem, to this point in time has been the availability of suitable instrumentation for determining precisely what is going on!

2) Some Methods for Determining Management Needs

The tool most generally employed to determine the level of performance has been a statement, preferably written, which describes the conditions which will exist when the job or objective, is being discharged properly. Every objective has a standard. However, this standard is very often only in the subordinate's head. Lucky are those subordinates

who have at least been told what the current standard is. Extremely fortunate are those who actually have been given a copy of the objective. Where no written objectives and standards of performance exist there may be, in fact, conflicting objectives: the one the superordinate perceived and thus thinks is being pursued; and the one the subordinate perceived and is actually pursuing. Needless to say, these "objectives" may not be the same.

Practitioner's have developed many methods of determining the need for management or administrative action. Each has its strengths, each its weaknesses; each can be tailored to meet a specific situation; and each may be used singly or in combination. An in-depth discusssion of these methods is beyond the scope of this monograph; however, it was felt that those methods having the greatest transfer value to the Management, Administrative Profile System would add background and clarity to later discussions. For this reason the following traditional methods for determining management or administrative action are presented.

Analysis of an Activity (Process, Job, Operation). One way to increase productivity is to keep to a minimum the number of steps which must be taken to produce a product or service, then make sure each step is executed with the least amount of required resources. The procedure is relatively

straightforward: gather the data, analyze the data, develop options for accomplishment of the activity, and select the one that best addresses the constraints of time, cost, performance, and reliability, identify new or modified skills and knowledge, and design or contract for skills and knowledge training.

Analysis of Problems. Clues to trigger management or administrative action can come from an operating problem. The problem may have emerged in part because an individual or a group did not know enough, did not have enough skill or did not have the necessary training (as mentioned earlier as the supervisors standard and the subordinates standard) to successfully handle the problem.

Analysis of Behavior. Clues to needed action can also come from an analysis of atypical behavior by individuals or groups. Chronic absence, spoilage of work, carelessness, accidents, irritability, contentiousness, resistance to direction, resentment toward instructions/ authority, etc., are symptons of conditions which may call for corrective action. A manager, for instance, may need to be a better planner or communicator.

Analysis of an Organization. Poor organization can affect individual and group performance. (Failure to meet goals, confused planning,

sloppy delegating, weak discipline, capricious rewarding, unclear goals, absence of written standards of performance, favoritism, uneven work loak, etc., can lead to low morale and marginal organizational performance. The presence of these or other weaknesses can produce some of the patterns of individual and group behavior listed above. An analysis of these weaknesses can produce indications for management/administrative action.

Interviews. A management/administrator may "feel" action of a specific nature is needed in a particular organizational unit. To substantuate this feeling he needs information. He arranges a formal meeting with appropriate individuals and through the utilization of previously prepared interview forms he gathers the necessary data for analysis. Other types of interviews (employment, transfer, promotion, etc.) can be utilized in an organization setting. One which is extremely helpful is the exit interview. During this "last talk", a person leaving the organization is in a position to suggest how things could be better. Some of these things may point directly to policy changes, organizational changes, etc.

Research. Most institutions conduct some type of research as part of their on-going activities.

Results may produce new policies, procedures, techniques, or organizational structures. As these new assets or strategies are phased into the organization's planning, implications for training and development emerge. The management practitioner, as one of the planning group, recognizes these implications and begins appropriate action.

Self-analysis. Most people constantly evaluate themselves. They want to do their best. They set high standards for themselves. They are critical of their performance against these standards. They "know" what they need in the way of additional resources, knowledge, skill, or insight. Given an opportunity to express these thoughts, as through an organizational program of formal periodic self-appraisal for growth purposes, they give direct clues to organizational climate and employee satisfaction. Where a number of individuals have this opportunity, a summary of their statements can reveal organizational needs.

Surveys. Surveys can be used to take inventory of operations, advanced planning, etc. Like studies, surveys can be delimited to a part of the organization, or can be organization-wide. They can be focused on a single activity, or beamed at a function or program. Like studies,

they are mounted only after a felt need exists for the information they will produce. Surveys, as a rule are costly to implement. Part of the findings of a survey can identify college needs. Surveys often are one step in a study sequence.

The foregoing gives some indication as to the magnitude of the assessment problem. Everyone seems to agree that it would be done; however, what method should be used? If not one method, what constitutes the best mix? These questions, as well as many others, must be resolved by management based on their individual and collective experience-bases and intuitive judgment. We have not even touched on the multiple problems associated with displaying, analyzing, and initiating action as a result of employing one or more of the identified "finding out" methods.

Thus management's attempts at achieving zero discrepancy have been hamstrung by the lack of precise instrumentation and procedures that would ensure a timely, accurate flow of information in sufficient quantity to enhance the decision-making process. Ideally, this instrumentation would:

Permit the gathering of designated data throughout the institution from a single department (e.g., budgeting, travel, purchasing, or personnel), or from a particular level of administration (e.g.,

vice president, deans, etc.);

Facilitate the consolidation of collected data for purposes of conversion to meaningful, single-page, decision-oriented information;

Facilitate the analysis process by highlighting specific needs of problem areas;

Facilitate the analysis process by showing all "points of impact" associated with the identified need or problem;

Facilitate the analysis process through identification of influencing controls, constraints, overlaps (duplication) of authority, accountability, and/or products;

Facilitate the analysis process by pinpointing major cost factors associated with the generation of institutional programs--instruction, data processing, maintenance, administration, etc.;

Facilitate the analysis process by assisting in the development of options for meeting the identified needs or problems;

Facilitate "full disclosure" presentation of options for management selection; and

Facilitate administrative control over the selected solution's design, development, implementation, and evaluation stages.

As the above characteristics of "ideal instrumentation" indicate, the management responsibilities

of assessment and planning are a great deal more complex than merely selecting a "finding out" tool.

In summary this chapter has addressed the problems of determining what action is required of the management or administrative teams and, in so doing, has discussed eight of the conventional methods employed by practitioners. Additionally, the complecity of the assessment problem was highlighted and the characteristics of "ideal instrumentation" were identified.

Throughout this chapter the guiding philosophy has been that management practitioners must avail themselves of the best possible diagnostic tools. As in medicine, the specific disease must be identified before effective treatment can begin. In a management context, progress can only be made by first determining your exact position relevant to any constituency group, policy, process, or product and then comparing this position with where you thought you were or where you must strive to be. Therein lies the basic problem--the precise answer to the question: "where are we now?"

The conventiinal approaches to the assessment problem all have a common shortcoming. They all assume the practitioner has a broad experience base. He supposedly has the requisite skills to select the most appropriate technique for assessment, design the necessary data gathering

instruments, analyze the results of data collection, isolate the problem, and recommend or implement a practical solution.

It has been the explicit intention of this chapter to develop the assessment problem as the single most important responsibility of the management team for it is only through an effective assessment process that management and the administration can move from decision-making predicated on one crises crises after another to a planned, programmed, and budgeted work environment conducive to goal-congruence.

B. Systems Approach and the Assessment Problem: An Overview

System is defined in the dictionary as "an assemblage of objects united by some form of regular interaction or interdependence; an organic or organized whole; as the solar system."

The dictionary definition is a good introduction to a discussion of systems. However, it is not a sufficient explanation of the rather special meaning of the term as it is used in this report. Although this special meaning is not in conflict with common usage, it is nevertheless different and rather specific.

The special meaning of the term systems and such related terms as systems concept, systems approach, and systems analysis emerged during and after World War II as a result of research and development in problem solving, efficiency analysis, and, most significantly, the

development of complex man-machine systems (the computer, military weapons systems. etc.). The prime lesson learned during these research and development activities was that the specific mission or purpose of a planned system must be identified prior to the assignment of development of the component parts. Henry Ford was the first to recognize the process as being systems analysis. It is the system as a whole, and not its parts separately, that must be planned, designed, developed, installed, and managed. What is of paramount significance is not how the individual components function separately, but the way they interact and are integrated into the system for the purpose of achieving the goal of the system. (In Ford's case, the Model T).

Generalizing from the above, systems can be defined as deliberately designed synthetic organisms, comprised of interrelated and interacting components which are employed to function in an integrated fashion to attain predetermined purposes.

Systems surround us everywhere. The United States Office of Education views the sum total of all educational effort of all the fifty states as comprising the National Educational System. The State Department of Education, State of Florida, has a somewhat more restricted view in that its primary concern is the Florida Educational System. Valencia devotes energies to the maintenance of a physically smaller, but functionally identical, system--the Valencia Community College.

Each of the deans devote energies to the maintenance of even smaller but, again, functionally identical system. One instructor and a group of students engaged in teaching-learning interaction for the purpose of achieving some goal constitutes a system.

Thus we see that systems analysis or the systems approach, at least from the standpoint of the instructor, is not really new. He has always formally (written) or informally (intuitively) identified goals and scheduled activities so that the students achieved professional growth.

From the definition and the above example, then cannot each one of us cite some occasion that we have performed systems analysis? As with most "new", "innovative" techniques, once we penetrate the veneer of esoteric labels, it is not really that new. We just could not understand the jargon!

It is not intended to oversimplify an extremely valuable tool in the manager's arsenal of assessment techniques, nor imply that everyone is an accomplished systems analyst. However, it is hoped that some misunderstandings about the systems approach being merely a fad have been dispelled.

There are three main aspects to any system--purpose, process, and content. The first aspect is that systems have purpose. Systems are constructed from parts or components, and the sum of these is the content of the system. The content of a system is organized for the

accomplishment of a specific purpose. The operations and functions in which components are engaged in order to accomplish the purpose of the system add up to the process of the system.

Systems thus have purpose, process, and content. The sequence of purpose, process, and content is important because it implies priorities. Systems can be identified by their purpose. Purpose tells us what has to be done; it determines the processes that have to be undertaken. The content, the parts that comprise the system, is selected for ability to accomplish the processes required in order to achieve the purpose of the system.

If a system is to maintain itself, and thus persist in time, it is essential that it ensure the adequacy of its output (accountability). In order to ensure such adequacy, the system has to provide for a continuous external assessment of its output and provide for feedback of the results of this assessment back into the system. This so-called "feedback" provides the basis for the system to adjust to the dynamic, and sometimes hostile, environment within which the system operates.

There is also a second way in which a system must be able to adjust to its environment. The environment imposes various constraints and controls--legal, financial, political, and social. The current literature provides excellent examples. There are demands

from various publics that the educational process be changed to accommodate performance contracting, accountability, more equitable distribution of finances, individualized instruction, increasing faculty militancy, collective bargaining, etc.

Third, a system must be sensitive to the dynamic needs and purposes of its environment (the City of Orlando, Orange County, the State of Florida, the Nation, and the various publics comprising these entities). The larger purpose(s) of the environment influences and ultimately determines the purpose of its (the environment's) component systems. Thus, Valencia Community College must continuously assess these larger purposes and stand ready to adjust or defend its purpose, process, and content.

Banathy provides us with a comprehensive definition of systems. He says:

> Systems are assemblages of parts that are designed and built by man into organized wholes for the attainment of specific purposes. The purpose of a system is realized through processes in which interacting components of the system emerge in order to produce a predetermined output. Purpose determines the process required, and the process will imply the kinds of components that will make up the system. A system receives its purpose, its input, its resources, and its constraints from its environment. In order to maintain itself, a system has to produce an output which satisfies the environment.

With Banathy's assistance, it is now possible to formulate an approach to systematically and continuously focus attention on the complex problems associated with

assessment, planning, policy development, communication, and evaluation. We can think in terms of identified purposes for the Valencia Community College System as a whole, or in terms of one academic year, one discipline area or even one class session, one report (automated or manually prepared), or... any desired activity that may cut across the entire college. We can pose questions, such as, "What exactly is the purpose of the expenditure of "X" amount of scarce resources (time and money)?"; "Who is involved and to what degree?"; "Is the expenditure legal in terms of legislation and/or policy?"

Certainly before we can discuss cost factors, personnel, time-frames, legality, etc., we should give considerable thought and energy to precisely defining what it is we are about. In print, the previous statement seems so elementary that one might wonder why space was afforded. The reader can provide his own answer by answering this question: Can you identify the precise purpose of your program or function area (as defined by the Florida PPBS Guidelines) in terms of how it contributes to the accomplishment of the Valencia Community College System's purpose(s).

Now we get to the heart of the systems approach. It is not sufficient to simply identify purpose, process, and content--these system aspects are constantly interacting and, in theory at least, channelled toward the same end. From real-life experiences however,

we realize that all "systems" (organizations, institutions, governments, and military establishments) are comprised of dysfunctional as well as functional elements. The systems approach is merely one technique that facilitates internal assessment and forces thinking about how the elements comprising one of the major aspects impact on and interact with all other elements. In short, the systems approach enables management to isolate dysfunctional elements, modify or eliminate them and observe new impacts through graphic representatives as opposed to costly operational observations.

Once the conflict of purposes has been resolved, all programs, sub-programs, elements, and interim products can be explained and classified as to supportive or non-supportive contribution and we can proceed in the same analytical frame to ensure both process and content, to include their elements, and to be positive in their contribution to Valencia's goals (purpose).

C. Systems Approach--Practical Applications for Valencia

The word "practical" points mainly to something of proven effectiveness. It focuses on what can be produced, created, built, or put into effect and eliminates notions of mere occurrence of likelihood.

In the previous chapter the systems approach was demonstrated to have proven effectiveness-- after all, educators have been using the basic technique since Socrates and Plato--and it can be put into effect at

Valencia to develop meaningful and flexible management/ administration guides. Meaningful in the sense that they will convey a longitudinal view of purpose, process, and content. Flexible in the sense that the manager/ administrator is still free to exploit targets of opportunity, or adjust to dynamic environmental forces.

If something is to be put into effect there must exist a rationale and a plan of action. This chapter will develop the rationale and a skeleton plan. It is felt that the Valencia Management Team must be involved to a depth that ensures their identification and support. Addressing these key areas, then, this chapter has been organized for discussion of the following topics: Rationale; Toward Goal Congruence; Organizational Structure; and the MAPS as a Change Agent.

1) Rationale

Why should Valencia Community College move from traditional methods of needs assessment (internal or external) to a process that appears to be more time-consuming, complicated, and on the surface, at least, seems to offer the same end-result only in a different format?

The ultimate answer, of course, rests with the management of Valencia Community College. But the following advantages seem to dictate adoption of the systems approach as manifested in the developed Management/Administrative Profile System (MAPS):

Operationally tested instrumentation which

is fully compatible with Florida's Program Budgeting System (FPBS);

Data collection, data display, and data analysis instrumentation and procedures to enable smooth transition to Florida's PBS;

Ability to pinpoint decision-centers, bottlenecks, voids, overlapping authority, and the degree to which actual practive matches legislative or policy intent; and the

Ability to instantly identify the cost factors associated with a particular activity or group of activities forming a program (this goes beyond instruction costs as it also embraces data processing, maintenance, clerical assistance, and administrative support).

The recommended MAP System, in concert with the adopted FPBS, provides Valencia Community College with an opportnnity to operationalize a management and administrative climate conducive to the development of an esprit de corps second to none.

2) Technical Overview.

The systems approach has been defined as, "common sense by design." However, there exists a great deal of confusion because of the technical jargon explosion--systems adjustment, systems view, systems approach, systems analysis, systems design, systems development, ad infinitum.

This chapter will attempt to break down the

artificial jargon barrier by showing how these commonly employed terms interface, one to the other, and thus permit a return to the more practical definition of "common sense by design".

System Adjustment. In Valencia's case, the communities of Orlando and Orange County, the State of Florida, and to a degree the Federal Government evaluates (formally or informally) Valencia's products (student services, reports, etc.). On the basis of the recipients perception regarding the standards of performance expected of a product, acceptance or rejection of that product occurs. These are the extremes of the performance scale and generally are not achieved within the full context of their meaning. The range between these poles can be as large or small as the user (Valencia) desires. A procedure is required that enables the user to sample and ascertain the degree of acceptance or rejection on a continuous basis which, in effect, becomes an "early warning system". This process is more accurately referred to as "feedback" and, as indicated, the result can be negative or positive.

Feedback, however, is not system adjustment. It is the enabling information base that should trigger management or administrative action. The action that is taken will result in some adjustment in purpose, process, or content. In come cases

"action" takes the form of a decision to gather more information concerning some facet of the feedback--but someone, somewhere must adjust to this change in the normal process.

Systems view. A special way of viewing things that requires the search for specific purposes of the entity under study; the identification of structure and relationships; the examination of methods of maximizing the interaction of the parts; and the highlighting of those parts or processes that are non-contributing (passive) or contributing in a negative manner.

The systems view calls for some fundamental changes in the way studies are organized and conducted. The traditional approach to inquiry normally begins by defining: (1) "What is it?"; (2) "What does it do?"; and (3) "What is it for?". Unfortunately the process tends to terminate with the identification of "What is it?".

When discussing education, most individuals can accurately define schools, facilities, books, etc. However, the same individuals become somewhat less precise when describing what education does. A greater barrier to communication presents itself when responding to the question: What is education (or a particular course) for?

The systems view then simply changes the priorities of inquiry and directs initial energies

at determining what a particular thing, system, course, report, etc., is for. This requires a detailed, specific definition of purpose, and it is only through this definitive step that one can identify precisely what has to be accomplished, by whom, and what order.

Systems approach. Suffice to say that the systems approach is merely an application of the previously discussed systems view to human endeavors.

Systems analysis. A three-phase technique of investigation that employs the systems approach to the collection of appropriate data; display of this data in a graphical format using system symbols; and analysis of the displayed data for purposes of improvement.

Systems design, development. These applications of systems thinking differ more in degree than in technique. The design process normally follows analysis and incorporates the recommendations of systems analysts' (practitioners' of the system approach) for improving the efficienty or effectiveness of a current or proposed procedure (budgeting, travel requests, purchasing, etc.).

System development follows system design and entails the actual development and testing of all supportive materials (to include training and orientation). Implementation of the designed and

developed system is not included and therefore, should be costed and controlled separately.

3) Applications Overview

Systems analysis is a technique which can be defined as the taking apart of something (either an entire system or any of its interrelated subsystems) in order to understand its nature and scope. It is the process of looking at complex problems which interrelate the systems approach and the traditional planning process.

One of the tools used in systems analysis is a thru-put or flow chart which depicts pictorially the units and/or individuals responsible for specific activities, the documents which are involved, where document copies are stored, and the interaction among various units and/or individuals. The thru-put chart is an invaluable tool which will enable a manager to identify problem areas in a troublesome system and to ascertain what functions his employees are performing. Through following the document and/or information flow on the chart, an individual manager can ascertain who is actually making the decisions, where the information is stored, if there is duplication of effort and files, if the work is accomplished according to established organization policies and operating procedures, and the types of data which are used in making decisions. When a manager has

these types of information, especially in pictorial form, he becomes aware of how his organization is operating. He can then determine if the decisions are being made at the appropriate level based on adequate data and if changes are needed. (See Figures 2-1 and 2-2).

4) Toward Goal Congruence

Achieving, in this context, is not intended as being finite, rather, it serves to indicate a continuous process--a striving for perfection that in all probability cannot be obtained but nevertheless, is worth seeking. High degrees of achievement are possible, especially within a close-knit community such as Valencia Community College, but the actual success will vary from one work-group to another.

Goal congruence is a term used to describe a normally hypothetical situation in which the organization's formal goals have been evaluated by the various formal and informal groups comprising the organization and have been adopted by these groups as the legitimate basis for their existence. Groups, formal or informal, cannot persist in time without a purpose for their continuation. The purpose can be to impede organizational progress! For this reason it is imperative that Valencia's goals be reduced to writing and communicated to the staff as the first step

toward congruence.

Ideally, the Valencia staff and faculty would have considerable input to the goal identification process and the goal statements would be phrased in such a manner as to permit measuring the actual degree of achievement. Platitudes such as "improve educational opportunity" have their value but their contribution to evaluating the effectiveness of a technique, program function, or the Valencia Community College System as an entity is nil. Valencia has an excellent faculty and their skills, knowledge, and understanding should be reflected in the formal goal statements. Again, involvement is the key to identification and identification is the stepping-stone to congruence.

Once the current level of perception is ascertained through application of the recommended Management, Administrative Profile, and the staff and faculty have been appraised of the adopted Valencia goals, it is imperative that management not regard these steps as constituting final action. Follow-up, in the form of periodic "perception assessments" of the staff and faculty (considering Valencia's size, a 100% assessment would not be prohibitive) is mandatory. Management and/or administration must ensure that group (formal or informal) "boundary maintenance" activities, environmental forces, or just plain

communication failures have not modified the formal goals at the action-level. In short, is the perception of operation-level personnel commensurate with the perception of management/administration? If not, appropriate corrective action is indicated.

Following the dictates of the systems approach then, we proceed to identify the precise purpose(s) for the Valencia Community College. With these major intended consequences highlighted, we can focus on the sub-purposes (or more precisely--programs) that must be successfully executed if Valencia's purpose(s) (goals) is to be realized. An important concept has been indicated--purpose determines the programs that are necessary for accomplishment. Programs always follow purpose.

The next topic discusses the program organization in terms of "hurdles" that must be identified and dealt with if reorganization is desired.

5) Organizational Structure

The traditional community college structure is well known and therefore no effort will be expended to describe its form. Suffice to say, the People, the Board of Trustees, President, Vice-President, Deans, etc., constitute the formal organizational hierarchy. Any number of informal organizations exist concurrently with the formal structure. It is these informal structures that actually execute the day-to-day business of

management, control, and evaluation.

"Power centers" are the hearbeat of these informal structures or, as some authors have called them, "overlays". A "power center" is simply the person to see if you want something done. In all probability that person (secretary, clerk, etc.) will not appear on the formal organizational chart. However, he has become a power center by managerial default (formal authority's failure, for whatever reason, to become involved in decisions or action of a particular type) or social influence on the formal authority to the extent that the informal power center renders yes or no decisions across a broad spectrum of organizational activities. I am certain the reader can recall examples of: "You'll have to see Jones about that--he has the blank forms", or "You had better clear that first with Smith--he has the president's ear on matters like that." These are power centers formal or informal.

Power centers are than a fact of organizational life--Valencia not excluded. The action required of the Valencia management team is to identify these centers and then to analyze their contributions, pro and con, in terms of the departments purpose, which, of course, must be supportive of Valencia's. In short, practical application of the systems approach to ascertain what people are actually doing for the purpose of comparison with what the

formal organization depicts them as doing. The Management, Administrative Profile System provides the instrumentation and guidelines for viewing Valencia Community College in terms of the program concept adopted by the Florida Programming Budget System. This program approach reveals the magnitude of program impact on available resources, the individuals involved, and the cycle of events associated with these programs and subprograms. Analysis of these data will pinpoint power centers, reveal the extent of program or subprogram overlap, number of organizational elements performing autonomously within the same program area and/or those work groups who cooperate on portions of a program area, and highlight voids in the process and/or content aspects of the system.

Change, as indicated in the Rationale, is a process that must be predicated on knowledge of all the parts and their interactions. Systems analysis is ideally suited to this task; however, its value as a management tool is directly proportional to management's interest and support. With programs, power centers, workloads, and activity cycles identified, the difficult part is at hand--a decision must be made to reorganize programatically or maintain the current organization chart and accompanying job descriptions.

Certain destinct advantages accrue to the

institution willing to invest time, energy, and patience to surmount a certain amount of initial confusion and to tolerate some missed deadlines. Such managerial advantages of a program organized college include, but are not limited to, the following:

Programs of the college (Instruction, Student Services, etc.) remain constant even though funding sources may change;

A programatically organized college minimizes duplication of work efforts and encourages "formal" lines of communication;

The president and his management team are in a better position to set priorities because programs breed a program-oriented approach to planning and management, thereby increasing the overall capability of the college; and

Each program area becomes an integral part of the college. Consequently, the college becomes one cohesive institution capable of focusing energy and resources on organizational purpose(s).

For a more detailed discussion of the program classification structure as advocated by the State of Florida see Appendix 1.

6) The Management Administration Profile System as a Change Agent

Change for the sake of change can, understandably, have a demoralizing impact on any institution--

Valencia being no exception. Change as an exercise and change as an instrument to imporve the quality of institutional life are readily distinguishable. In the latter instance there is definite evidence of top management interest and support. The evidence normally takes the form of a well-developed plan with heavy emphasis on involving those individuals who will be responsible for execution of the planning process. Involvement leads to commitment, commitment leads to identification, and identification leads to high-order achievement.

As with education, change is evolutionary as opposed to a revolutionary process. There are five ingredients necessary for change: (1) desire; (2) knowledge; (3) energy; (4) a conducive environment; and (5) implementation. Desire and energy must be supplied and sustained by the management. Management must also have, or acquire, the necessary knowledge concerning the available methods and instrumentation so as to better predict the results in terms of their requirements. Environment and implementation are achieved through policy statements.

The necessary knowledge for directing the change effort is the primary product of the recommended Management, Administrative Profile System. Without descriptive information addressing the "Where are we now?" kinds of questions, change

becomes merely another term for crisis management.

In considering the Management, Administrative Profile System for possible implementation, management should be cognizant of at least three general problems:

> The assessment process is often feared by those interviewed because they tend to percieve it as a means to evaluate their performance in some area of individual accountability;
>
> The assessment process is seen as being executed by internal data gathering teams with particular prejudices--management's hatchet-man; and
>
> The criteria for assessment is rarely known in advance to the interviewee and, coupled with his threat-threshold, interviews consume more time than necessary.

The above generic problems can be greatly minimized through well-planned staff and faculty orientation sessions and, if necessary, workshops for those desirous of additional training.

To facilitate management's ability to deal with these very real concerns and to focus the Management, Administrative Profile System (MAPS) on those areas felt to be of central importance for such a system, decisions were made about the design considerations. These included the following:

The MAPS should serve college top management; that is, the president, vice-presidents, and deans and they should be able to target MAPS applications by selecting from the options;

It should be a system which can be applied to a college environment under internal direction by college staff and/or faculty;

Also, it should not be so complicated or require so many specialized skills that it forces management to be passive;

It should focus on management policies and administrative procedures, not with the assessment of individuals, their performance, skills, and styles of management or administration;

The data collection requirements of the MAPS should be modest and flexible to minimize interference in day-to-day college operations, to reduce the overall cost of use, and to allow its partial use on a test basis in a particular college; and

The systems analysis procedures should present findings to an audience (specified by the management).

The MAPS, in its current configuration, deals with questions concerning the effectiveness of college programs. It deals with management's concern of work being accomplished, individuals

involved in work, organizational structure, financing of work, and decision-making. It is structured to deal with these questions in a way which will be non-threatening and useful to management and it is based on concepts of modern program budgeting management.

The current design, though of necessity based on many tradeoffs, does not severely restrict the use of the MAPS. Any such system requires assumptions such as these, and we have attempted to develop assumptions which are non-restrictive and pointed in the direction of current management change.

It is important both for users of the MAPS and for those considering its use to be prepared to be flexible in the system's application and its terminology. College goals, unit objectives, activities, plans for allocating resources to activities, and methods for evaluating the effectiveness of college programs exist in every functioning organization. However, lacking clear and constant managment direction, these procedures develop problems.

> Value judgments become implicit rather than explicit, estimates grow to be based entirely on individual experience rather than records;
>
> Management processes become personalized

rather than standardized;

Knowledge becomes power and is hoarded;

Communications suffer, cooperation becomes more difficult, personal kingdoms arise, decreasing top management's ability to direct the course of the college; and

Stability becomes safety, and change is difficult to implement, morale suffers as priorities become confused and conflicting.

In general, the management process comes to be perceived as mystical rather than rational.

Current trends in management (and the MAPS) are toward systematizing management through the introduction of more data collection, control, and dissemination, and an increase in the formalized steps of management. A president will have his own beliefs about the extent to which he wishes to move his college in these directions. The MAPS can assist him in monitoring the current state of his college, and as mentioned earlier, in progressing in these directions.

Thus, the MAPS has been developed with the end view of making it a useful tool for a variety of college managements, though they may differ in their approaches to running a community college. We hope that it will be refined further and made more useful as time passes. It is our belief that

this system, or one like it, can only assist community colleges by helping them monitor, from time to time, changes in the state of their college's management.

3. IMPLEMENTATION

The previous section described the development of the MAPS and its concern with the management of community colleges. Because it is concerned with managements, the MAPS can be a powerful tool for analysis and change in a college. However, its concern with management gives it a particular kind of vulnerability; that is, without the support of management, the system cannot work effectively. If management is not involved in the analysis of their own procedures, it is unlikely that they will concur with changes in these procedures and support the implementation of them. The most influential manager is the president. If he understands and supports the Management, Administrative Profile System, its' chances of success are vastly increased.

A president's support does not mean, of course, that he needs to be involved in all the details of the data gathering, analysis, and the consequent presentation of the results. His involvement in these activities, although useful, would often require more time than he has available. One of the president's primary decisions, therefore, (if he decides to support the use of MAPS in his college) is the selection of a delegate to head the MAPS effort for his

college. The president's support and the appointment of an effective operating head for the MAPS are sine qua non of the MAPS's success in an agency.

Once the president has made the appropriate and necessary decisions in these two areas, he should proceed to specify his choices for the six kinds of options listed below.

A. Planning Considerations

1) Objectives of the MAPS

An important first step is the specification of the objectives of the system's use. This is important not only to guide the effort but for dissemination purposes. Knowledge of the objectives for the potential use of the findings can help guide the MAPS team and respondents throughout the effort.

The rationale for implementation will be distinctive to each college using the MAPS. However, a sample of possible objectives may be of use to those who are in the process of formulating their own objectives. The following is a short list of possible objectives.

A president (or other college management/ administrative personnel) may wish to use MAPS if:

He is new to the college and wishes to see an analysis of how the management processes occur in his college or a particular

institutional area;

He and his management team wish a report on their progress toward a program planning system of management;

He wishes to study a part of his agency or several program areas;

He does not wish to move toward a program-planning style of management, but is interested in how his agency's management appears from that viewpoint;

He feels that it is time for a review of management or administrative processes, and wishes to bring his managers together in order to study findings about how the college operates; or if

He is considering alternative management changes for his college, and wishes to make these decisions in the light of findings that the MAPS has to offer.

2) Audience for the Findings of the MAPS

The president, or his delegate, must make decisions about the audience for the findings of the MAPS. This audience, or group of users, will be involved both in the development of the MAPS findings and in management decisions based on these findings. Since the MAPS is a management oriented process, it is important for the president to involve his management team in receiving the findings,

judging their accuracy, and making decisions about the consequent steps to be taken.

The method employed to present the findings and the way in which participants are involved will play an important role in the resulting perceptions of these individuals. Therefore, most presidents will want to emphasize the participant role for their management teams. It is important that management caution those who are executing the MAPS effort to be constantly cognizent of the fact that the findings are preliminary, and subject to discussion and change if the audience feels that they are inappropriate. The timing of the involvement of the audience or participants is also important. Data gathering should be followed closely by preliminary presentation of findings. The presentation of findings should be done in a context which clearly indicates what kinds of decisions may result from the consideration of the findings. The president should lay out for his management team which areas for decision making he wishes them to consider when they receive MAPS findings.

3) Selecting Application Areas for MAPS

Determining what institutional units and programs should be covered by the MAPS is dependent upon the previously selected objectives of the president. A unit or program is "profiled" by interviewing some of its administrators and

operational personnel. Since coverage (interviewing and filling out interview forms) and analysis of the results require expenses to be incurred by the college, the decision must be made as to how much time is available for the MAPS effort. This decision will necessarily have a high impact on the area to be covered. It should be noted that since the MAPS is highly flexible and very inexpensive--(two to three man-weeks of released time)--usage of the system is possible. Among the decisions that the president has to make concerning his coverage are:

> He must decide which community college programs are to be covered by the MAPS's application. These programs described in Appendix 1 are those of Instruction, Community Service, Academic Support, Student Service, Institutional Support, and Independent Operations.
>
> The president may wish to consider which organizational portions (administration, data processing, maintenance, etc.) of the college require coverage by the MAPS. Although this decision is a difficult one, it may ultimately form the basis for determining the allocation of available resources. Because of the problems of "linkages" between organizational portions of the college, however, this form of

potential cost savings may not be practical. Rather, a single policy, procedure or program of the college may best serve as a test application for the MAPS. This is useful in training the MAPS personnel of a college and in indicating to the president and his management team how the system works in detail. This is the recommended low-cost way of investigating the MAPS.

The president should make the decision about the extent to which the MAPS can be applied to the different administrative levels in a college's hierarchy. One of the main advantages of including a number of levels (instructor to dean perhaps) in the application of MAPS is that the resulting "deep coverage" allows for the comparison of perceptions by individuals at these different levels within the college. This is useful and informative to the president and his staff in relation to questions of morale, dissemination of college policy, and a view of actual college practice. The disadvantage of "deep coverage" is its increased cost to the college in terms of time and manpower.

4) Staffing the MAPS Effort

As previously outlined, one of the first decisions that the president must make upon his decision to proceed with the MAPS is his selection of an operating head for the MAPS effort. This

individual should be someone the president trusts and an individual whose technical ability has been established. Since the subject matter of the MAPS is management, particularly the modern program planning aspects of management, the individual selected should desirably have background and experience in these areas. However, it is not necessary that all the MAPS staff have this type of background. In fact, application of the MAPS is a useful training device for those staff or faculty menbers that the president desires to become more knowledgeable about these concepts. Estimates of the number of staff to be required for the effort can be made on the basis of the length of total time allowed (fewer interviewers can interview a given number of people if they have additional time), the number of interviews to be conducted, and the coverage the president wishes the MAPS to have. An idea the president should consider in making team selections is the drawing of the MAPS personnel from a variety of staff and faculty positions. This ecumenical staffing of the effort may avoid feelings of staff and faculty favoritism, and may increase communication and understanding across these boundaries.

5) Nature of Findings

The designers of the MAPS have developed several strategies for the presentation of the findings:

A president may request only descriptive findings. These are findings which describe the college and its management and administrative practices as they exist, without attempting to place weights on these practices or the existence of gaps which may be discovered. Because no inside (or even outside) assessments can point out all the details of complicated management practices, the president may well wish the MAPS team to specify only descriptive findings and allow the determination of recommendations to be made by management personnel who will review them.

Alternatively, the president may wish to have the MAPS team not only develop descriptive findings, but to place value weights on these findings and go through exercises such as the development of recommendations and the comparison of current practices of modern planning, programming, and management systems.

It is important to emphasize that, in determing the kinds of findings desired, the president should consider the process by which the findings will be presented and the actions which may be taken on them. This is essential so that the nature of the findings and the process of decision-making will be in harmony.

6) Additional Data Gathering

Once the decision is made to proceed with the MAPS effort, a president may wish to employ the data-gathering team for additional work. Me may add questions to the instruments about related or wholly extraneous matters. This option of using the data-gathering effort as a vehicle for obtaining further information is not recommended (as discussed in 2), of the following section B.), but it is a possibility and in special circumstances may be desirable.

In conclusion, the success of the application of the MAPS effort depends entirely on the support of top management. With the understanding and encouragement of the president, MPAS offers a variety of options to community college decision-makers:

A clear determination of the objectives of the MAPS within the college not only guides and disseminates information, but helps to organize and direct the effort under a single responsible head;

It is important to designate the targets of and plans for using the MAPS findings so that management participants have an understanding of their roles as audience and/or participants;

The president must decide what specific college policies, procedures, or programs are to be covered by the MAPS application and allocate the appropriate funds or personnel to support MAPS

use;

The selection of the MAPS team should include an operating head who understand management and program planning, and a team (from a variety of institutional units) who will benefit from the MAPS application as a training device while facilitating communications within the college;

The ultimate presentation of the MAPS findings may be descriptive and/or in the form of recommendations, but the process of presentation should be consistent with plans for actions sought as a result of the MAPS application; and

The president may in some cases utilize the MAPS effort to carry out additional data-gathering efforts.

B. Preparation of Participating Personnel

It is essential to the success of the MAPS effort that it be explained to all of its potential users as clearly as possible so that they may fully understand its uses and its outputs. This includes not only the operating officer and the staff who will conduct the interviews and analysis (who will, of course, require extensive additional instruction) but also the respondents, whose cooperation is fundamental, and the audience (who in some cases are identical) who must approach the MAPS with expectations which are in line with the reality of the system's procedures and its

types of findings. To this end, a basic introduction to MAPS, such as portions of this report, should be available to all persons involved with the system. It will be the core of the training of interviewer/analysts and the most straight-forward means of informing those from whom the data will be gathered and those to whom the findings will be circulated.

While these training and information objectives can be attained with the text of this report and the materials contained in its appendixes, it must be remembered that they are the product of six month's effort, the goal of which was the development of the information-gathering portions of the MAPS. The result is a workable system. It is hoped that ensuing efforts will devote additional attention to dissemination and the training aspects of the MAPS to ensure the maximum convenience and benefit of its employment.

While development of dissemination materials was not within the scope of this initial project, the present report is intended to supply some guidance so that a college may make immediate application of the MAPS.

In its ultimate, or ideal form, the dissemination and training materials should make use of workbooks, audio-visual techniques, and other efficient instruction aids both to improve the depth of familiarization and training and to enable this to be done in a shorter time and with less burden on the operating officer at

the college using the system. Where appropriate in the following discussion, we will both describe the training procedure with the existing materials and parenthetically outline how this might be improved upon with a more comprehensive menu of materials.

The president should examine the explanatory training materials to give him a full understanding of the size and the nature of the effort required, and to enable him to decide how useful the results will be to his college. He may wish to delegate some of this study, but ultimately it is he who must decide whether he wishes the system to be used in his college.

The president may also wish to make a few changes or additions to the scope or details of the instruments. While this is encouraged, it must be remembered that the instrumentation is planned and has been field tested to bring it to that form which the designers feel will produce the most accurate results, the fewest entry errors, and the most reliable analysis. To the extent that either the wording of questions or the physical design of instruments is altered, the compatibility of the results with the rest of the system cannot be guaranteed. If specific information is desired which is not elicited by the original instruments, it is preferable to append additional questions rather than to alter the existing ones. Even in the case of such additions, the responsibility for devising analysis techniques and results-presentation formats rests on

the author of the new questions.

The central element of all training materials for users and the principal motivation to respondents of the MAPS is an explanation of its purpose, its methods, and its results. Copies of appropriate parts of this report represent an immediately accessible means of accomplishing this. (A sound filmstrip presentation would be best because it is both more dramatic and more efficient for uses where groups are involved). Whatever the medium, it is desirable that participants know they are seeing the same general description of the MAPS.

In addition to introductory matter, this report includes instructions to the staff person who is delegated responsibility for operating the system, procedures for training the personnel who will conduct the interviews and analysis, copyable masters of the instruments, plus the necessary instructions and formats for analyzing the raw data and preparing the outputs for presentation to whatever audience the president has selected.

1) Training the MAPS Team: The Team Leader

This person, perferably of middle to upper management level, has been delegated the task of organizing the personnel and resources necessary to carring-out the MAPS in the college. His responsibilities include arranging for interview staff; explaining the system to the proposed respondents; distributing and re-collecting the

questionnaires; scheduling the interviews; overseeing the data tabulation and analysis; directing the preparation of the findings for presentation; and most importantly, conducting the actual training of the interviewer/analysts.

Since his role is of pivotal importance and present training materials are of limited capability, he may wish to be assisted in his own training by some part of the MAPS development team (Valencia Community College). The aim of the team leader's training is to make him totally familiar with the instruments and analysis techniques, and to enable him to anticipate and answer most of the questions which might occur to interviewers in training. In the ultimate form of the system, he could also be coached in the actual administration of the interviewer-training materials. This might involve supplementing a comprehensive instruction manual with a visit by the operator to either a workshop for training such persons or an individual training session carried out by Valencia or its subcontractors. At present, however, much depends on his diligence and his understanding of the content of this chapter. In either event, trouble-shooting and immediate assistance with specific problems will be available from Valencia Community College.

2) Orientation of MAPS Target Groups

It must be realized that in order for the college

and administrative personnel (staff and faculty), whose responses will be analyzed by the MAPS, to participate freely and to cooperate fully in the employment of the system, they too must understand its purposes and what it will require of them. Any inquiry or assessment, regardless of its source or use, bears the danger of being perceived as threatening by those of whom it asks information. If a system such as MAPS is used to produce usable data, it must enlist the support of its respondents. To this end, it is suggested that an introductory presentation be made to an assembly of those who will will be asked to fill out questionnaires and submit to interviews, and that copies of appropriate chapters be available for that presentation. The use of a "canned" filmstrip/tape presentation would have many advantages for the development of uniform presentations. The prime advantage would be to assure that everyone hears the same story and would additionally be available for references and Consortium-wide distribution.

It is anticipated that most staff members will not be highly apprehensive about the use of the MAPS (as demonstrated by the pilot test), and it is hoped that the initial concern will decrease dramatically after a presentation concerning the use of the results; the descriptive nature of the results; and the lack of individual assessment in the system.

This presentation can begin by describing the kind of outputs the MAPS will have, and by demonstrating that the purpose is not to find out "what you're doing wrong or who is not doing his job", but rather, "what are the management and administrative procedures and what is the relationship between the reality of the management and administrative practices in the college and the impression of what constitutes reality as perceived by management." And (if the president requests), the MAPS can point out changes which might improve the management or administration of the college. The college management must clearly perceive that the MAPS is not going to provide a panacea for all problems of management of the college. Furthermore, it should be realized that the findings are not individual but collective, and that the usefullness of the MAPS findings is, in large part, dependent on their management's own time and effort as conscientious sources of information.

Support and cooperation for the MAPS might also be enhanced by a "cover letter" or memo from the president's office explaining the intent of the assessment and inviting participation, beginning with a meeting to view the presentation describing the MAPS.

3) Training Personnel to Conduct Interviews

While eventually it may be concluded that the

relative convenience of using "home college" people to conduct the interviews and analysis is outweighed by the objectivity of outside personnel, it is probable that at least most of the early applications of the system will be done in this manner. There is very little, if any, travel or lodging cost to be borne, and training, scheduling, and actual operation can be set up quickly and conducted entirely within the organizational fabric of the college planning to use the MAPS. Also, the idea of the system being used by the college for its own purposes is most clearly embodied in having the instruments administered by familiar faces, with attendant advantages to the establishment of rapport between interviewer and interviewee. Most improtant, a college which develops its own in-house capability for using MAPS will be able to bring it into action annually or test specific changes with a minimum of delay or outside arrangements.

The principal disadvantage seems to be in assuring a high level of team leader and interviewer/analyst training without elaborate and expensive training materials and outside support. In the ideal situation this challenge would be met by "flying squads" of trainers with the most advanced instructional materials who would arrive at each college within the Consortium and conduct not only the training but some of the explanation to possible

interviewees and general audience as well. They might also be available, either on site or at some central office (Valencia College) to advise on analysis and presentation of findings. In the absence of this kind of support, the college will have to rely on the resourcefulness of the delegated MAPS team leader and on the abilities of the staff selected for interviewer/analysts. Two other disadvantages derive out of the relationship of these "in-house" interviewers to the college and to the acquaintances they must interview. These interviewers are in a way trapped by their own knowledge of the college; they have difficulty asking "dumb" questions (which may be needed to assure comparability of data across program lines) of friends who know that they (the interviewers) could answer the question themselves. Faced with this situation, they will be tempted either to skip the question or to enter their guess as to how the respondent would answer it. On other questions, they may be unable to resist arguing with the interviewee as to the accuracy of his perceptions. Training and careful overseeing by the team leader can greatly reduce the bias stemming from these causes, but it cannot eliminate one fundamental paradox: in many cases, the best persons to conduct the interviews and analysis may well be the persons who should be the respondents.

The best way out of this and the problems which might arise due to disagreements between interviewers and respondents of nearly equal rank would be to use junior staff, wherever possible, as interviewer/analysts. This would be a useful experience for the junior personnel and would give them a useful insight into the management of the college.

The actual training of interviewer/analysts should probably be alloted three full days, though this might be shortened if all trainees conscientiously read this report before the session begins. The team leader should make an introductory explanation of the MAPS, being sure to include the reasons it is being used by this particular college, and a description of the kind of findings which may be expected. Copies of all instruments should be distributed to all trainees. Each trainee should then fill out the four-part Staff and Faculty Perception Assessment (VCC Form IV) instrument for himself, after which a discussion of the questions and the variations in answers should help to bring misconceptions about definitions and organization to light.

Next, the instructor should distribute blank copies of VCC Forms I, V, and VI to each trainee. Once this is done, one of the students should interview the instructor, while the others record the answers on the provided interview guides. If a

student has a question, he should make a mark in the margin of the guide rather than interrupt the interview, which should also be conducted without asides from the instructor, unless the interviewer loses his way completely. The aim here is to give an immediate and accurate simulation of the interview situation and to surface problems and questions about technique, recordings of answers, and keeping the interview moving. (The instructor might do well to occasionally wander in his answers so that the trainee/interviewer must bring him back to the subject; in any case the instructor must make an effort not to let his knowledge of ensuing questions or of the analysis process intrude into his performance of the role). A discussion should follow the interview simulation and should concern itself especially with questions noted by the trainee(s) and with the instructor's (gently stated) comments on the interviewer's technique.

Another simulation should follow in this instance which allows trainees to perform both as respondents and interviewers. This may best be achieved if the instructor will take trouble to write a fictitious role in advance and to prepare copies of a questionnaire filled out with answers appropriate to that role. If the class is small, one trainee should be selected to study and perform the role of interviewee; he studies his role while

the others enter "his" questionnaire responses in their interview guides. If the training session is a large one, the trainees may pair off into interviewer-respondent teams, each then preparing for the interview as described. During the simulated interview, the instructor should observe closely and note mistakes, poor techniques, ways of asking questions which restrict answers, and other problems. The interviews should not be interrupted to discuss these, however, this should be done when the simulation is ended so that all may benefit from the critique. Completeness of answers should be the goal here.

At this time, the concept of the two-man interview team should be introduced and its advantages explained. These may be summarized as permitting the "asker" to engage the interviewee in relatively uninterrupted conversation and to maintain eye contact, while the "writer" concentrates on accurate and complete recording of the answers. Furthermore, the "writer" may jump forward or go back in the instrument if he detects an answer to another question within the respondent's discussion of the one at hand. There is less likelihood of the "asker" losing his place (and his rapport with the interviewer) if he does not have to do this. Of course, the "writer" may have to indicate that a question has already been answered when the dialogue

arrives at that point; this is commensurate with the writer's duty of interrupting if the conversation strays too far from either the instrument or the schedule.

The interview guides and questionnaires thus obtained (VCC Forms I, IV, V, and VI) will be the raw material for the introduction to analysis. Data analysis and consolidation forms (VCC Forms II and III and Worksheets #1 and #2) should be passed out by the instructor and the trainees should, under his guidance, enter the responses of the interview onto the appropriate form or worksheet. Swapping of sheets to cross-check accuracy should produce discussions of difficulties encountered. Once the process of consolidating entries on the forms is understood, completed copies are distributed (containing data from a complete set of hypothetical interviews) and instruction in tabulation can proceed, based on the methods outlined in Section 4.

The next subject is the preparation of the analytical findings for presentation to whatever audience the president may have selected. An introductory outline of the means and the purpose of presentation is followed by distribution of blank presentation formats (design formats are contingent upon the particular situation) on which the findings are entered by the entire trainee class.

The user designed format sheets should be usable either for reproduction in a written report or as masters for the preparation of overhead projector slides. In either case, it is essential that whatever hand-lettering is done be as neat and clear as possible. For the purposes of the training session, only a verbal presentation should be prepared. One or more members of the training group should be selected to give the briefing to the remainder of the class and the instructor, who may wish to ask some sticky questions, as might the president at the time of the final briefing. The training session should end with a discussion of any remaining problems, and tentative assignment of interview schedules.

4. EXECUTION

A. Technical Discussion

This chapter will address the problem of "ideal instrumentation" by presenting three-levels of abstraction that must be realistically assessed in order to separate symptoms from problems.

Each level is preceeded by a general process model which identifies the specific blank forms, alternatives, and major action steps associated with a particular level of assessment. Referenced forms are included as well as guidelines for their completion.

At this juncture it might well serve our purposes to define "level" of assessment as employed in this

monograph. The term refers to broad categories of information which describe particular segments of the college. When these categories are brought together through analysis they form a complete management or administrative profile of the college, program, sub-program, or element. The term has no relationship to the institution's organizational hierarchy or to the degree of difficulty associated with implementation. In addition, design considerations dictated flexibility; hence, the developed levels of application afford the president alternatives. For instance, a problem dealing with costs would indicate a Level "A" Assessment, a suspected communication breakdown would indicate a Level "B", or consistent procedural errors might indicate Level "C". A problem of greater magnitude, such as collective bargaining, might indicate the preparation of a complete profile depicting work-loads, productivity levels, etc. The particular problem and the president's desires, then, dictate how much or all of the Management, Administrative Profile System is used at any one time.

The primary intent of the Management, Administrative Profile System is to provide designated managers and administrators with timely, accurate information, in sufficient quantity to enable them to take appropriate action--and, as was indicated earlier, this action may take the form of comparing postures with another institution of simply deciding "to take a closer look."

The Management, Administrative Profile System is not a panacea. Rather, it is a systematic process for highlighting the strengths and weaknesses of institutions in a manner designed to minimize individual threat. It is a descriptive, as opposed to prescriptive, system.

The manner in which MAPS is implemented is directly proportional to its value as a "finding out" tool. There can be no substitute for top management support! Figure 4-1 synthesizes Section 3 which described the implementation stage and depicts the results as a process model. Regardless of the "level" decided upon for actual implementation, it is highly recommended that the action steps indicated in Figure 4-1 be followed.

1) The Level "A" Assessment

The purpose of this assessment is to reveal to management and/or administration the degree to which individuals, departments, or the college as a whole is involved in the program areas adopted by the Florida State Department of Education. In addition, the using college will be able to ascertain relative costs persuant to the degree of participation.

The scope of cost-coverage embraced by Level "A" entails much more than instructional costs, which to a great degree are currently available, as it permits the highlighting of those cost factors associated with report preparation (ADP or non-ADP); specific maintenance activities; formal and informal counseling; committee actions; and various clerical activities.

The execution of a Level "A" Assessment enhances the college's ability to respond to questions, such as: "What does he do besides teach "X" number of classes?" "What does that report cost?" "How many people/hours are we devoting to that program/ subprogram/element?" "How much are we spending for the filing and retrieving of papers/documents/ reports?" and "What is our productivity index for course/department/major area/degree in comparison with others?" (These questions are intended to be indicative rather than inclusive).

Figure 4-2 describes the major action steps associated with a Level "A" Assessment and assumes the requirements fo Figure 4-1 have been met. The indicated action steps will carry the reader through the data gathering and consolidation phases appropriate to Level "A". A detailed discussion of Figure 4-2 will not be attempted at this point. However, the reader is urged to study the process model and thoroughly familiarize himself with the "big picture" as this will greatly enhance his understanding of the mechanics associated with a particular instrument.

a. Data Gathering Phase.

The first instrument encountered on Figure 4-2 is Valencia Community College (VCC) Form I (temporary). This form is the basic collection instrument of a Level "A" Assessment--the only

form requiring the time of an interviewee. Figure 4-3 depicts VCC Form I in a somewhat reduced format. The actual form normally appears on 8½ x 14 inch paper.

As indicated by Figure 4-3, the form is divided into eight major columns of data. Each column will be discussed to the degree felt necessary for explanation.

Column One; Sub-program Areas: No entry is required by either the interviewer or interviewee in this column. The indicated sub-programs are those specified by Florida's Program Budgeting Guidebook (a more detailed discussion is contained in Appendix 1). Sub-programs act as a guide to the interviewer and permit the structuring of a question, such as: "Do you participate to any degree in the elements or activities that comprise sub-program X?" The answer to this, or similar questions, must be in the affirmative or negative--no "sometimes" or "maybes" are permitted--and the answer is recorded by placing an X in the appropriate sub-column of Column Two (yes or no). The interviewer will pose this type of question and take the appropriate recording action for each sub-program listed.

Column Two; Participation: Explained above.

Column Three; End-Products Produced: This column is utilized only after a "yes" has been recorded in Column Two. No further action is required for "no" replies. Questions must be framed by the interviewer that elicit responses from the interviewee that will permit a full, accurate, and unambigious description of the end-product produced. As an example: An instructor would not describe "knowledgeable students" as an end-product. Rather, he would identify all those courses that he teaches by: course number, section, abbreviated title, level (freshman or sophomore), and whether or not the course is peculiar to one Major Area or common to many. (This same attention to detail is required to describe reports, special activities, or services that would be classified under other sub-program areas, such as Computing Support, General Administrative Services, etc.)

Column Four; No. of Individuals Served: In reality this column has relevance for only the Instruction Program. The other program areas would yeild responses such as. the entire student body, all staff and faculty, etc., and therefore would serve no practical benefit. Caution must be exercised by the interviewer to ensure that he is arraying

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class sizes in the same order as he has recorded class identifications. When the recording (Columns One through Four) has been completed, the interviewer should be able to read a class description from Column Three and then following an imaginary horizontal line, be able to match the correct class size in Column Four. As an extra precaution, the interviewer may desire to read the descriptions and sizes back to the interviewee for verification.

(Depending upon the availability of class rolls, etc., to the interview team, prior to the actual interviewing of faculty members, considerable time could be saved if the interviewers completed Column Three and Four prior to the actual interviews. In addition, they would negate such responses as: "I gave the Dean that information last week" or "That information is already available from--------." This comment applies equally well to Column Six).

Column Five; Degree of Involvement: This column will be used to record the interviewee's responses to questions, such as: "What percent of your average work-week is devoted to--(an end-product previously identified and recorded in Column Three)--?" An entry is required for each end-product listed.

The arrayed percentages must be in the same sequence as the end-products so as to facilitate horizontal matching. In no instance can any interviewed individual's total percentages exceed 100 percent (summed across all sub-program areas).

Two points need to be resolved by the users of MAPS: (1) What constitutes the number of hours which comprise a work-week (some institutions use 35 hours and others use 41 hours). The difference in hours creates a problem only when intra-institutional comparisons of cost or productivity are attempted. For inter-institutional comparisons, no problems are foreseen.

(2) How to treat faculty "overloads".

Column Six; Total Salary Level (including fringe benefits): Because the target of VCC Form I is one individual, further explanation of the entry required in this column is felt to be unnecessary. However, a reminder is presented--if at all possible this entry should be obtained from the Business Office or Personnel Office prior to the actual interview.

Column Seven; Pro-Rata Share Per Ed-Product: This column is utilized to record the relative costs of each end-product previously identified in Column Three. For example:

An interviewee has identified six end-products that he produces, or assists in producing, and has estimated various percentages of time for each on an average work week. In addition, his base salary is $11,200 with $800 in fringe benefits giving a total salary cost of $12,000 (Column Six). Assume, further, that of the six end-products identified, number four was estimated to consume 40 percent of the interviewee's average work week. Therefore, end-product number four's pro-rata share is $4000 per annum. (Calculations: Degree of Involvement, Column 5 times the Total Salary, Column 6 equals the Pro-Rate Share, Column 7, or in the present example: .40 x 12,000 = 4,000. In no instance can Column Five exceed 100 percent, nor can Column Seven exceed Column Six.

Column Eight; Cost Factors: This column is primarily intended to record cost data associated with the Instruction, Community Service, Academic Support, and Student Service Programs. The column has been divided into two parts: per student costs and per contact hour costs. Per student costs will be discussed first. Assume a particular faculty member teaches six courses (same six

end-products referenced in seven above) and course number (end-product) four's pro rata share is $4,000. In the event that this faculty member taught six courses during the Fall and six different courses in the Spring, then the pro rata share would be $2,400 and not $4,000. The calculations for per student cost: Pro-Rata Share Per End Product divided by Number of Individuals Served (Column 4) = Cost Per student. Per Contact Hour costs are divided in much the same manner. The only exception is that the number of individuals served is first multiplied by the semester hour factor (3 or 6) which yields semester hours produced by a particular class (end-product). Example: 25 students enrolled for three semester hours would produce 75 contact hours. Assuming a pro-rata share of $2,400. The cost per contact hour would be $32.00 ($2,400 divided by 75).

b. Consolidation of Data

As was indicated earlier, VCC Form I is the basic data gathering instrument for a Level "A" Assessment. Once the interviewers have conducted all interviews according to their finalized schedule they can begin the consolidation phase, as depicted by Figure 4-2.

The MAPS user has two options available to him for consolidation. The selection criteria being based on what questions management desires answers to. Option #1, which utilizes VCC Form II for consolidation purposes, focuses on major areas of instruction, such as: Political Science, Dental, Business, etc. The option is used when mangement desires to examine course load, number of qualified faculty, past/present demand, and relative costs. Option #2, (VCC Form III) permits an examination of the number of individuals involved in various programs, end-products produced, priorities, and relative cost factors. Option #2 consolidates data representing the entire college, a selected cross-section, or an individual, whereas, Option #1 consolidates for one major area. (If the MAPS user desired to compare five major instructional areas, he would require five separate VCC Form II's).

c. Valencia Community College Form II

This instrument serves to consolidate the data gathered from individual sources (VCC Form I) and is used only when management and/or the administration is interested in inter- or intra instructional program comparisons by major area. The primary source of all entries is VCC Form I, however, data processing or the college

catalogue could be utilized to post or verify the completeness of entries made to Column One.

Column One. This column will contain a listing of all individual courses that comprise a major area. (In some instances it may be necessary to use more than one VCC Form II in order to record all required information). One note of caution: if core-curriculum courses are included for one major area they must be included in the other comparative major areas. (See Figure 4-4).

Column Two. This column identifies the year in which a particular course is normally taught--first or second. In addition, should a comparison be required for all first year courses against all second year courses, or first semester to second semester, this column provides the classification key. If it is anticipated that this latter comparison may be of value, it is suggested that this column employ a two-digit code. The first (or tenths position) would indicate the year and the second (units position) would indicate the semester. For example: 23 would describe a course which is primarily taught during the second year, Fall Semester.

Column Three. The data contained in Column Three, VCC Form I (End-Products Produced) is matched against the course information described in Column One, VCC Form II, and whenever a match occurs a count of one will be tallyed on "scratch paper". Once all VCC Form I's have been scanned for appropriate matches (e.g., PSY 101), and the informal tallying has been completed, this total will be posted to Column Three on a horizontal line from the course identification. The cumulative result of consolidating action to this point has been to describe a group of courses by course and section numbers, abbreviated title, credit hour, value year and semester in which taught, and the number of faculty/staff members that currently teach this course. Once all actions have been taken to match, tally, and post for PSY 101, all remaining courses PSY 102, etc., would require the same treatment. If there were 16 courses comprising a major area, then 16 iterations of this process would be required

Column Four. Basically the same process as described above except that a tally is being developed according to data contained in Column 5, VCC Form I (Degree of Involvement).

Since an average is required for posting, this necessitates one additional arithmetic step: divide the sum of all tallies by the number of occurances comprising that sum.

Column Five. Again, the same requirements as described for Column Three, except the tally is developed for the number of students currently enrolled in a particular course. Since a "total" is requested, no division is necessary.

Column Six. Data for this column should be available from data processing, Office of Institutional Analysis, or the Registrar. It is not available from VCC Form I. In addition, a blank space has been purposely left for Form II users to indicate the number of years or semesters that the data in this column represents. This space has been provided in the column heading; previous years/semesters.

Column Seven. Data for this column should be available from the Office of Institutional Analysis. Again, space has been provided in the column heading for indication of the projection period; years or semesters and the appropriate number.

Column Eight. Form II users must tally the data contained in Column Seven, VCC Form I

(Pro-Rata Share Per End-Product) using the same process as described for Columns Three, Four, and Five (VCC Form II). Again, an average is desired so the division step described for Column Four is also required. Cumulatively, then, to this point one horizontal line of data will reveal:

Course and section number, abbreviated title, and credit hour value by major area;

Year and semester in which the course is taught and the number of faculty/staff involved;

The average amount of time being devoted to this course by the above faculty/staff members;

Current Course loadings;

Previous and projected course demands; and

The average salary of these staff/faculty members currently teaching a particular course.

Column Nine. This is a three-part column which displays different cost factors associated with the conduct of a particular course: Per Student; Per Contact Hour; and Other Indirect Costs. When all courses comprising a specific major area; type of course (lab, lecture, etc.); year of instruction; or

degree (AS, AA) are arranged on Form II, management can compare total cost factors.

Per Student. Divide Column Eight by Column Five and this will equal the relative cost per student enrolled in a particular course.

Per Contact Hour. Multiply the credit hour value (from Column One, by course) times Column Five, the product being credit (contact) hours produced. Next, divide Column Eight by contact hours and post the result.

Other Indirect Costs. These include utilities, administrative overhead, space, etc., but are exclusive of employee fringe benefits which have previously been accounted for--every activity, course, or program contributes to these kinds of costs and therefore, should bear their fair-share of the burden. In theory, this concept is admirable. However, practical application of the theory appears extremely sparse. This column is provided, then, for those rare colleges having such data and for those considering a move in that direction.

Because of the iteration process necessary to complege the scanning, matching, tallying

and posting steps, it is highly recommended that Form II be completed one (imaginary) horizontal line at a time. That is, completing Columns Two, Three, Four, Five, Six, Seven, Eight, and Nine for one course prior to moving to another.

d. Valencia Community College Form III

This instrument is used for purposes of consolidating Form I data when management or administration has elected Option #2. In essence, the Form serves two major uses: (See Figure 4-5).

As an interim vehicle for consolidating Form I data that cuts across multiple programs. The interview process may reveal certain individuals that devote a percentage of their time to four or more program areas. In these instances it might be highly advantageous to perform an interim consolidation; and

As a final consolidation vehicle for captured Form I data. The form is divided into seven major columns of information. The consolidation process is as follows:

Column One. No entry is required in this column. The program areas are those adopted by the State of Florida. It is recommended that the users of this Form consolidate by programs, rather than by columns. For

example: consolidate all Form I's according to Program 1.0; completing Columns Two, Three, Four, Five, Six, and Seven. Proceed, then, to Program 3.0 and repeat this action.

Column Two. There are three sub-programs that comprise the Instruction Program (1.0); four for Community Service; seven for Academic Support; five for Student Service; seven for Institutional Support; and two for Independent Operations. The source of data for posting these sub-programs is VCC Form I. As indicated, Form III serves to consolidate the collected sub-program data into six major program areas. In order to consolidate the 1.2 sub-program for instance, the user must scan all Form I's looking for a "yes" indication in Column Two. When a "yes" response is found, the user adds all entries in Column Five (VCC Form I) and enters this sum on scratch paper as the first entry of a tally. All completed Form I's are scanned and tallied in this manner. When the tally is completed, it is summed and then divided by the number of occurrences in the tally in order to determine the average time being devoted to a specific sub-program by the interviewed individuals. The calculated average is then entered on Form III,

Column Two, on the line provided for the particular sub-program.

All sub-programs are processed in the same manner. An entry is required for every sub-program line, even though that entry may be "NONE".

Column Three. Same process as above except that the tally total is posted----no division is necessary. (Source: Column Three, Form I).

Column Four. Same comment as above. (Source Column Four, Form I).

Column Five. This column has four-parts, A, B, C, and D. A space has been provided for MAPS's users to insert student, contact hour, etc., in the column heading of parts A and B. Again, the same process of scan, tally, and post according to sub-program is required for completing Part A. B becomes the sum of Part A. However, because there are basically two different target groups for Form I data gathering--staff and faculty--there are different column sources on Form I. Three examples should suffice: (1) Faculty and staff. Depending upon management's requirements, MAPS's users may enter "per student", "per contact hour", or "per end-products" in the space provided.

Assume that this example, faculty and staff, requires "per end-product" comparisons, the source becomes Column Seven, Form I. In all probability this should be the most common source. (It would serve little purpose to compare student hour costs with the costs of some administrative action). The intent of Form III is to permit management and administrative evaluation as to the costs of one program in relation to another. The common link between staff and faculty, then, is end-products produced: courses, reports, services, etc.; (2) Faculty. Three options present themselves, per end-product, per student, and per contact hour. Assume management has directed per student costs be consolidated--the source for scanning, tallying, and posting action becomes Column Eight (A) Form I; and (3) Staff. Only one course can be employed in this case--Column Seven, Form I.

Part C requires the MAPS's user to ascertain from the Business Office, if available, those indirect costs (utilities, space, etc., less fringe benefits) that are chargeable to sub-programs. Summing, then, by sub-program the total for the program should be entered in this column.

Part D is the sum of Parts B and C.

Column Six. The sub-program, within each program area, that has the largest average percent of time devoted to its end-products becomes the sub-program priority. (Source: Column Two, Form III).

Column Seven. Self-explanatory.

2) The Level "B" Assessment

The instrumentation for executing this assessment procedure has been designed to reveal the degree to which management, administration, faculty, and staff are in agreement. The focus is on the manner in which the institution determines the work that should be done, the adequacy of the organization pattern to accomplish the work, the adequacy and processes for financing the work, and what decisions are made by whom to complete the work.

As indicated by Figures 4-1 and 4-6, VCC Form IV should be distributed to the targeted individuals immediately after they have been exposed to the recommended orientation session. The Form (see Figure 4-7) is felt to be self-explanatory, however, the orientation session provides an excellent vehicle for clarification and most importantly, ensures the target group that the assessment process is non-threatening to them as individuals.

Two methods present themselves for collecting this data: the individual identifies himself by

affixing his name, or the data is collected anonymously. If the latter method is selected, some type of control code will be necessary to ensure a 100% return.

In addition, a cover letter should be attached to each distributed Form IV that explains the institutions purpose for collecting this data, how the data will be used, and to whom and when the form should be turned-in. Also, a key should be developed and explained in the cover letter that will permit analysis by authority/experienced levels. A suggested two-position key for all faculty members might be as follows: F (denoting faculty) followed by 1, 2, 3, or 4 (denoting faculty rank). Thus, a professor would be coded as: F1. Staff members could likewise be identified by a two-position key: A (for administration) followed by a numerical scheme that placed the individual at a particular organizational hierarchy. For example, 0 might indicate the president; 1 indicating vice-presidents and assistants to the president; 2 indicating deans, and on down the formal organizational chart.

There are two different categories of data, and for each a different type of worksheet has been developed. Figure 4-6 identifies these as: Closed-end questions, and Open-end questions. The following subsections describe the steps necessary

for recording each kind of data.

a. Worksheet #1 Closed-end Questions

Closed-end questions are those which have multiple choice answers. This type of answer is the easiest to record because it consists of a finite number of possibilities and therefore requires little, if any, interpretation. The answers are to be recorded on Worksheet #1. (See example in Figure 4-8).

Step One. The returned questionnaires should be sorted according to administrative or faculty levels so that each level is grouped separately. For example: All F1's in one stack, all A2's in another, etc.

Step Two. Form a single stack of the questionnaires in ascending order according to faculty or administrative levels, such as: A0 on top, followed by A1 second, and so on down to the lowest level.

Step Three. Complete the top of Worksheet #1--entries required are self-explanatory.

Step Four. Data from each respondent's Form IV will now be entered one at a time. If necessary an informal tally sheet may be employed that permits the tallying of multiple-choice selections by the respondent's appropriate faculty or administrative level. Each of the parts, (A, B, C, and D) comprising

Form IV will be entered on user prepared worksheets (following the suggested format described in Figure 4-8).

If for any reason a respondent has left a question unanswered, enter the total unanswered, in the column provided. If a respondent has inadvertantly given more than one answer, do not count his response for that particular question. However, in the event he answered twice but has included an explanation, try to determine a best answer and include it on the worksheet. When a respondent answers a questinn with "other" this type of answer will be tallied and the sum posted to Worksheet #1. In addition, all "other" answers will be treated as open-end questions and will require additional posting to Worksheet #2.

Step Five. Once the user has completed the top section (general information) of Worksheet #1 and entered the designated coding in Column One (such as: F1, F2, F3, and F4 identify the rows) the matrix format is complete. The columns are keyed to the possible selections associated with each question, whereas the rows are keyed to the category and level of the individual making a particular choice.

Step Six. Enter the number of individuals

selecting response a, b, c, etc. MAPS's users are cautioned to ensure that each level of respondent is maintained separately--great distortion would be presented if level F1 and F4 responses were combined. After the actual number has been posted to the appropriate intersection of row and column, divide this number by the total number of respondents, convert to a percentage and post to the appropriate column. Thus, each column will reflect the actual number of individuals selecting a particular response and the indication as to percentage of the total respondents that this number represents. The "total" row is self-explanatory.

b. Worksheet #2 Closed-End Questions

This section describes procedures for tabulating the data generated by open-end questions, i.e., questions which are not multiple choice and hence do not have a finite number of possible answers. An example of an open-end question would be, "What do you consider to be your primary job?". This question could be answered in an infinite number of ways depending solely upon the individual. Therefore it is necessary to provide a flexible means of recording this type of data. Figure 4-9

depicts a sample format for the guiding or user prepared worksheets. The first step in using the Worksheet #2 is to complete the top section. As will be noted in Figure 4-9, the Worksheet is divided into six columns.

Column One. Enter A, C, or D, depending upon which part of Form IV is being posted.

Column Two. Question number is self-explanatory.

Column Three. Enter the response that the individual completing Form IV has recorded. Rank order pertains to the number of times a particular response was indicated by those completing Form IV. The language need not be identical--only the meaning.

Column Four. The number of times a particular response was given.

Column Five. Self-explanatory (column four divided by number of respondents).

Column Six. Code indicating academic rank or administrative position. It is recommended that when a large number of Form IV's are involved that the users record according to level (as with Worksheet #1). When a small number of Form IV's are used this column becomes optional.

3) The Level "C" Assessment

The instrumentation associated with Level "C"

has been designed to guide the data gathering efforts of MAPS's users and enhance the application of systems analysis. Figure 4-10 presents a generalized process model for utilizing Forms V and VI.

The forms are employed to guide the interview process and serve as the vehicles for capturing the interviewee's answers to the indicated questions (Data Items 1 through 14). The forms are intended to be applied to the various sub-systems (one at a time) that comprise the college, such as: budgeting, admissions, registration, purchasing, travel, etc. The end-result of this application will be a graphical presentation of the actual, detailed manner in which a particular sub-system is operating. The forms, people, time-frames and actions can be displayed in a manner conducive to analysis.

Forms V and VI serve as the source documents for translating the answers to interview questions from a written format to one utilizing the symbols of systems analysis. Figure 4-11 reflects the recommended symbols.

a. Valencia Community College, Form V

This form guides the inquiry and recording efforts for seven basic questions. However, before it can be used management must previously identify which sub-system is to be investigated. The answers to the indicated questions are meaningful only in the context of a particular

sub-system, such as budgeting. Figure 4-12 depicts Form V in a slightly reduced manner as its normal size is 8½ x 14 inches. The questions (Data Items 1-7) are self-explanatory.

b. Valencia Community College, Form VI

Figure 4-13 depicts Form VI (and as was indicated for Form V) in a reduced manner. Again, the target for Form VI is one pre-identified sub-system. Seven questions are posed (Data Items 8-14) which are considered to be self-explanatory.

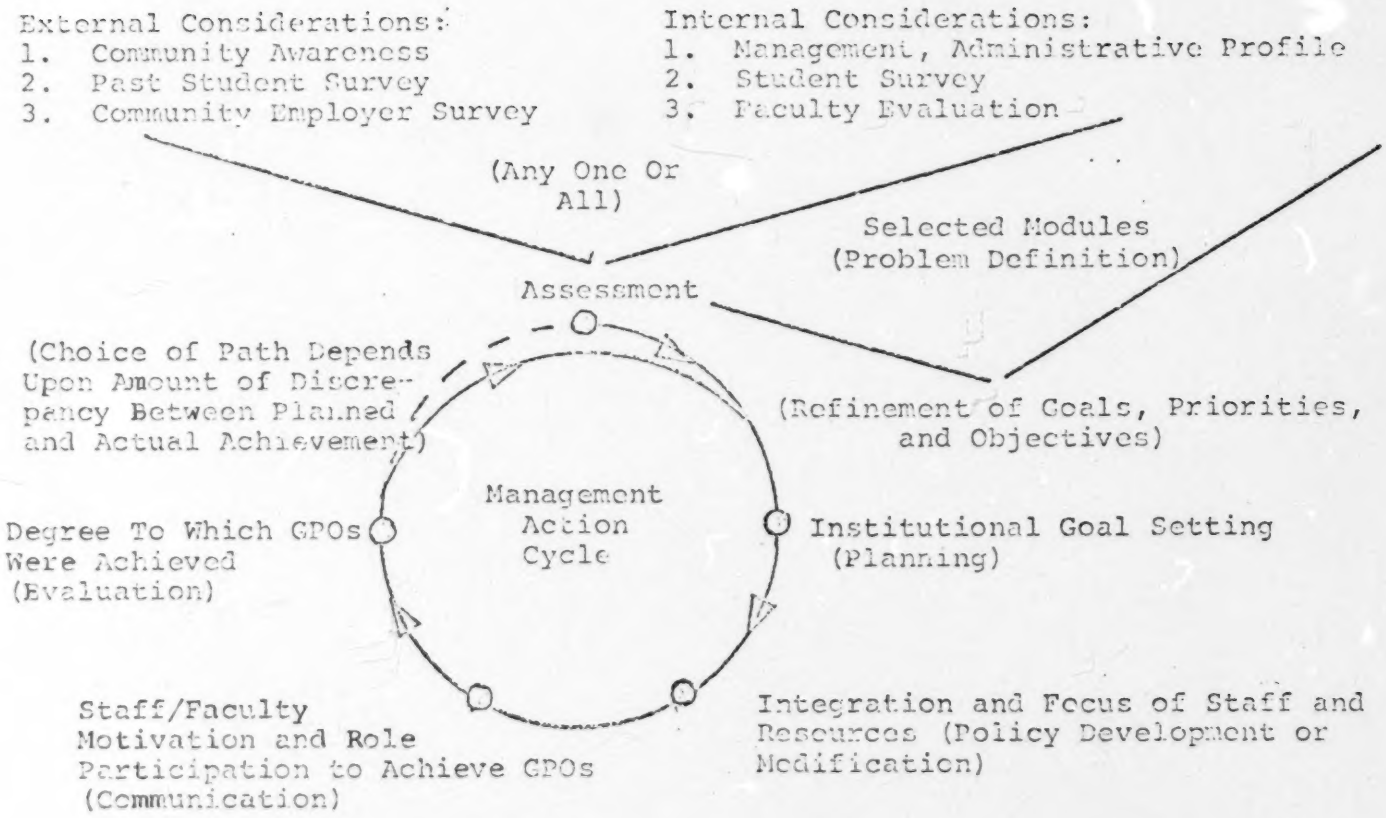
External Considerations:
1. Community Awareness
2. Past Student Survey
3. Community Employer Survey
Internal Considerations:
1. Management, Administrative Profile
2. Student Survey
3. Faculty Evaluation
(Any One Or All)
Selected Modules (Problem Definition)
Assessment
(Choice of Path Depends Upon Amount of Discrepancy Between Planned and Actual Achievement)
(Refinement of Goals, Priorities, and Objectives)
Management Action Cycle
Degree To Which GPOs Were Achieved (Evaluation)
Institutional Goal Setting (Planning)
Staff/Faculty Motivation and Role Participation to Achieve GPOs (Communication)
Integration and Focus of Staff and Resources (Policy Development or Modification)

Figure 1-1

Needs Assessment Project------Integration of Modules

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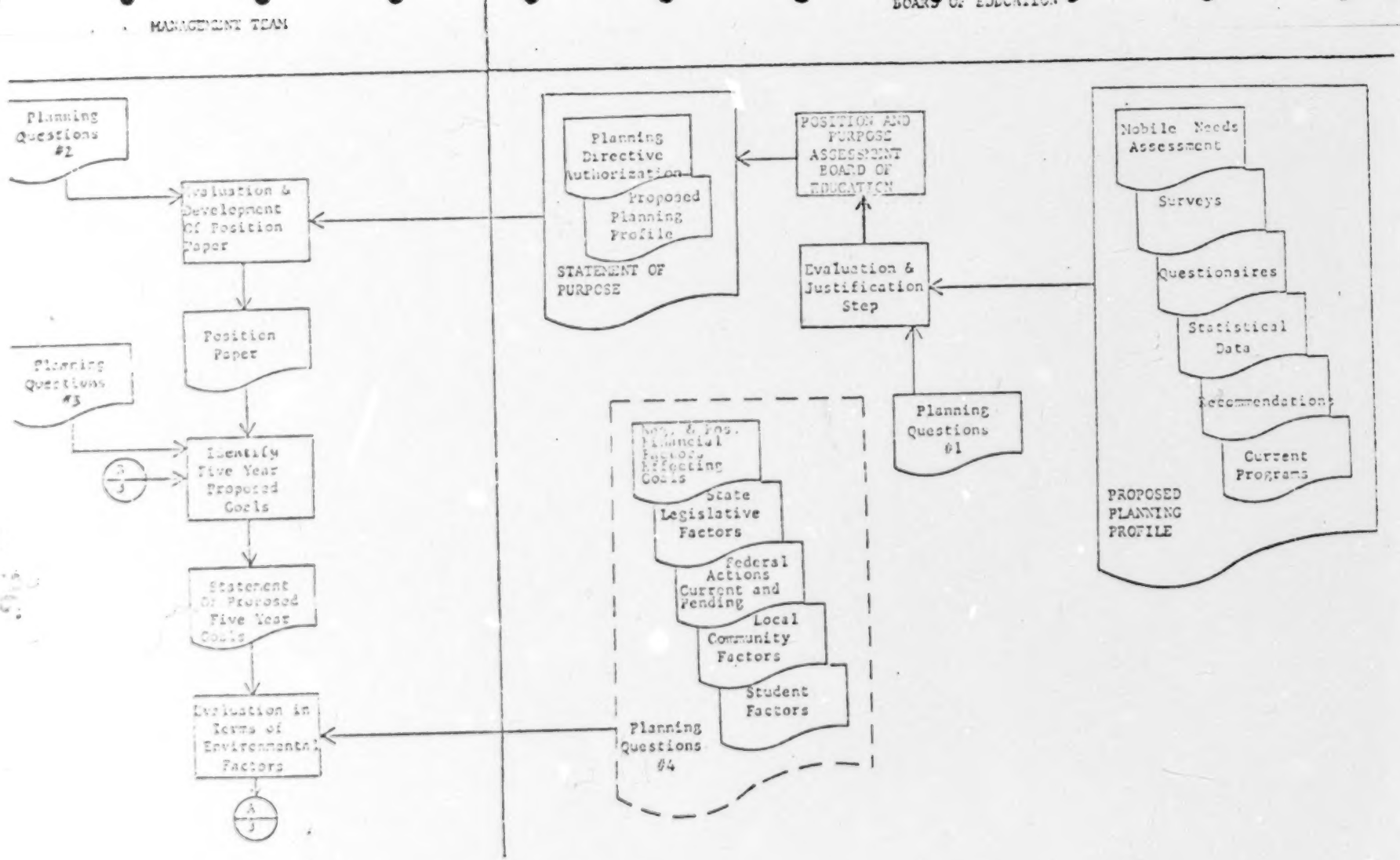

Figure 2-1

Sample Document Flow Diagram

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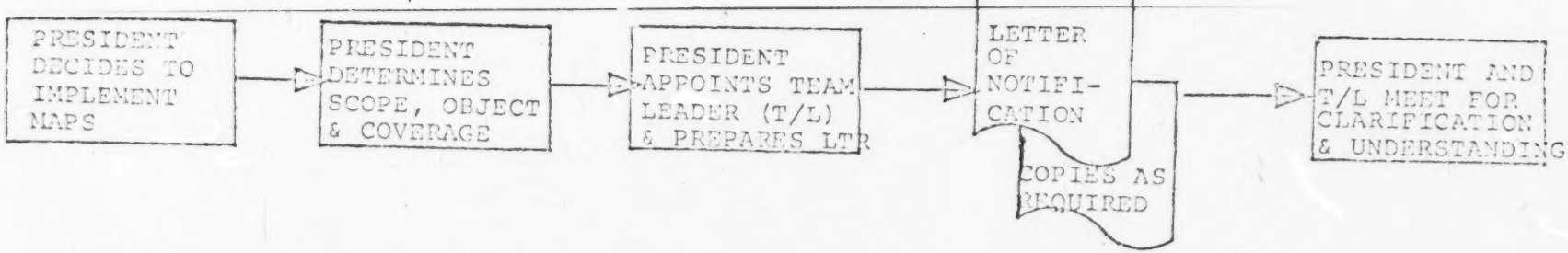
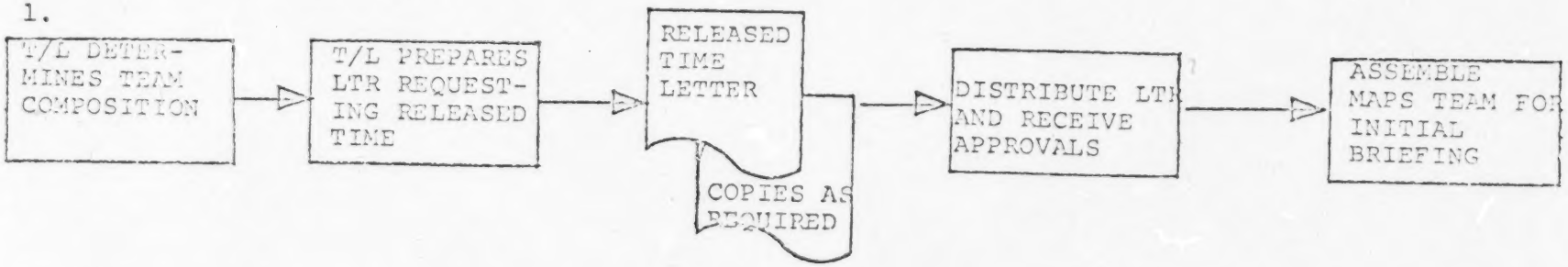

PRESIDENT DECIDES TO IMPLEMENT MAPS
PRESIDENT DETERMINES SCOPE, OBJECT & COVERAGE
PRESIDENT APPOINTS TEAM LEADER (T/L) & PREPARES LTR
LETTER OF NOTIFI-CATION
COPIES AS REQUIRED
PRESIDENT AND T/L MEET FOR CLARIFICATION & UNDERSTANDING

B. BUILDING THE MAPS TEAM

1.


T/L DETER-MINES TEAM COMPOSITION
T/L PREPARES LTR REQUEST-ING RELEASED TIME
RELEASED TIME LETTER
COPIES AS REQUIRED
DISTRIBUTE LTR AND RECEIVE APPROVALS
ASSEMBLE MAPS TEAM FOR INITIAL BRIEFING

2.

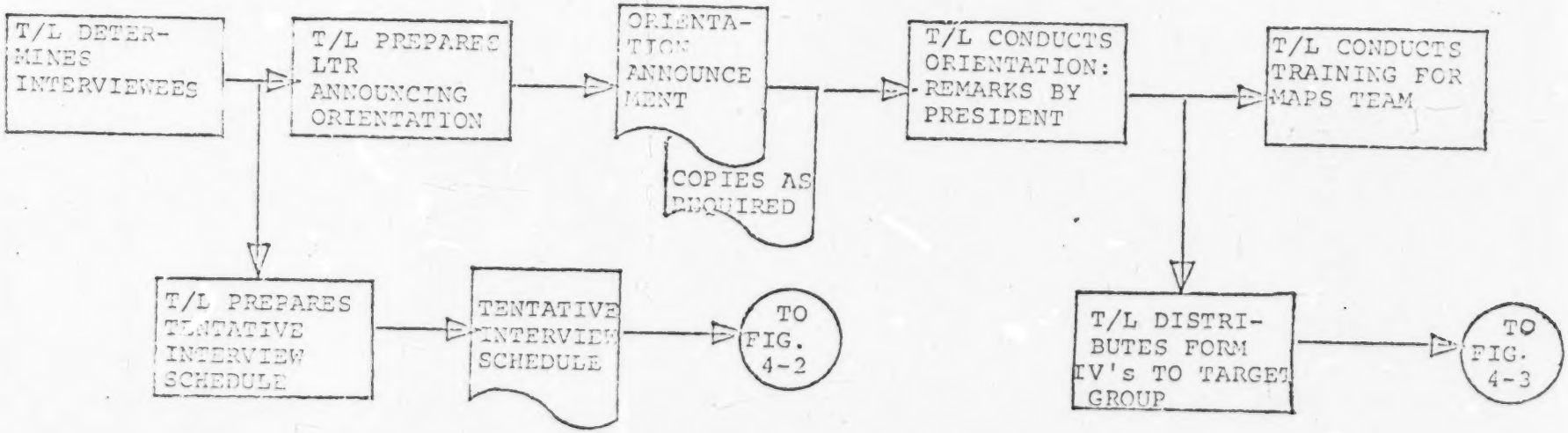

T/L DETER-MINES INTERVIEWEES
T/L PREPARES LTR ANNOUNCING ORIENTATION
ORIENTA-TION ANNOUNCE MENT
COPIES AS REQUIRED
T/L CONDUCTS ORIENTATION: REMARKS BY PRESIDENT
T/L CONDUCTS TRAINING FOR MAPS TEAM
T/L PREPARES TENTATIVE INTERVIEW SCHEDULE
TENTATIVE INTERVIEW SCHEDULE
TO FIG. 4-2
T/L DISTRI-BUTES FORM IV's TO TARGET GROUP
TO FIG. 4-3

FIGURE 4-1

IMPLEMENTING THE MANAGEMENT, ADMINISTRATION PROFILE SYSTEM

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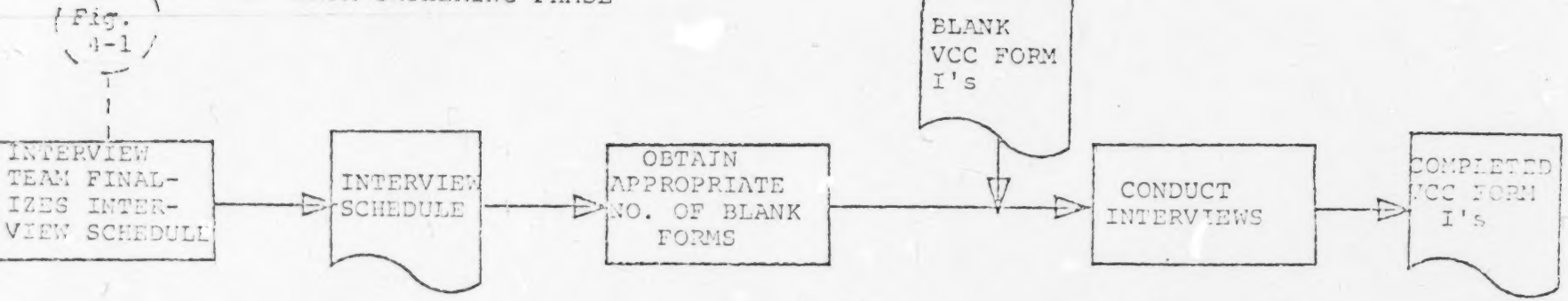

B. CONSOLIDATION OF DATA

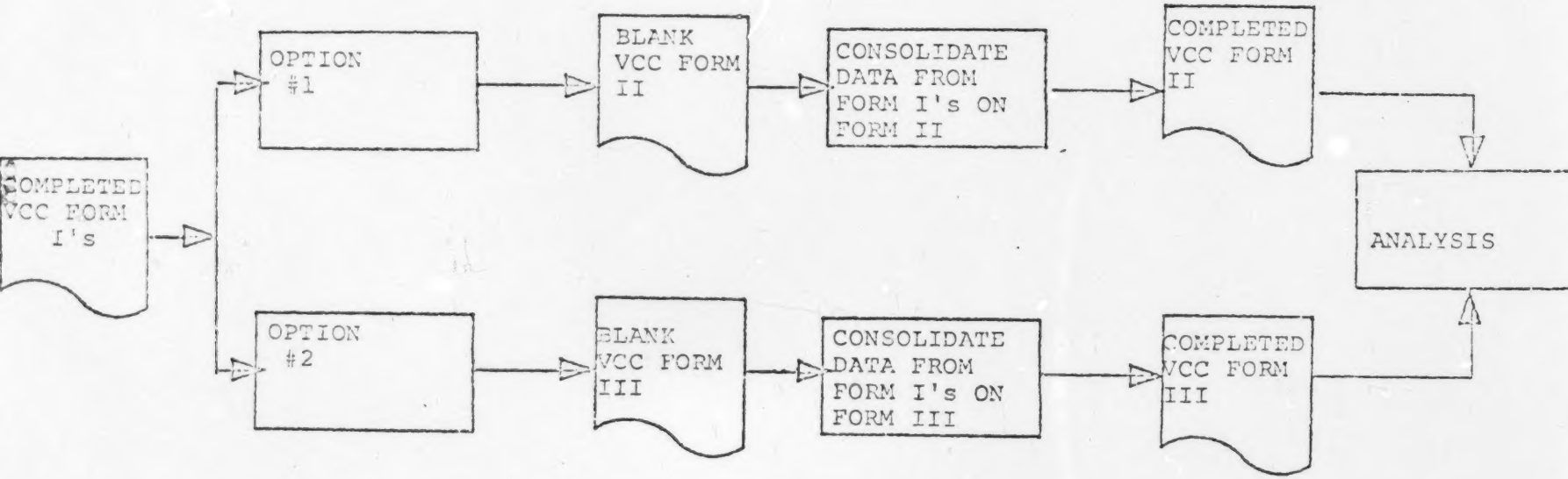
COMPLETED VCC FORM I's
OPTION #1
OPTION #2
BLANK VCC FORM II
BLANK VCC FORM III
CONSOLIDATE DATA FROM FORM I's ON FORM II
CONSOLIDATE DATA FROM FORM I's ON FORM III
COMPLETED VCC FORM II
COMPLETED VCC FORM III
ANALYSIS

FIGURE 4-2

BEST COPY AVAILABLE

LEVEL "A" ASSESSMENT

DEGREE OF INDIVIDUAL INVOLVEMENT IN COLLEGE PROGRAMS

DIVISION _____

DEPARTMENT _____

DISCIPLINE AREA _____

POSTED BY _____

INTERVIEWEE _____

INTERVIEWER _____

DATE _____

TIME: Fr. _____ To _____

STAFF _____ FACULTY _____

PAGE _____ OF _____

Sub-Program Participation (Individual Level)

Sub-Program Areas	Participation		End-Products Produced (Course No.'s, Special Activities, Services, Reports, Etc.)	No. of Individuals Served (i.e. students by course)	Degree of Involvement (%of Time Aver. Week)	Total Salary Level (Including Fringes)	Pro-Rata Share Per End-Product	Cost Factors	
	Yes	No						Per Student	Per Contact Hours
1.20 Occupational Instruction									
1.30 Developmental Instruction									

Control Symbol: VCC Form I

Figure 4-3

BEST COPY AVAILABLE

	Participation		End-Products Produced	No. of Individuals Served (i.e. Students by course)	Degree of Involvement (% of Time Aver. Week)	Total Salary Level (Including Fringes)	Pro-Rate Share Per End-Produce	Cost Factors	
	Yes	No	Course No.'s, Special Activities, Services, Reports, Etc.					Per Student	Per Contact Hours
1.40 Community Instruction Services									
3.21 Cultural Enrichment									
3.22 Television/Radio Services									
3.23 Consultative Services									

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	Participation		End-Products Produced	No. of Individuals Served (i.e. Students by course)	Degree of Involvement (% of Time Aver. Week)	Total Salary Level (Including Fringes)	Pro-Rata Share Per End-Product	Cost Factors	
	Yes	No	Course No.'s, Special Activities, Services, Records, Etc.					Per Student	Per Contact Hours
3.24 Community Use of Facilities									
4.10 Libraries									
4.20 Museums and Galleries									
4.30 Audio/Visual Services									

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	Participation		End-Products Produced	No. of Individuals Served (i.e. Students by course)	Degree of Involvement (% of Time Aver. Week)	Total Salary Level (Including Fringes)	Pro-Rate Share Per End-Product	Cost Factors	
	Yes	No	Course No.'s, Special Activities, Services, Reports, Etc.					Per Student	Per Contact Hours
4.40 Computing Support									
4.50 Ancillary Support									
4.60 Academic Administration									
4.70 Course and Curriculum Development									

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	Participation		End-Products Produced	No. of Individuals Served (i.e. Students by course)	Degree of Involvement (% of Time Aver. Week)	Total Salary Level (Including Fringes)	Pro-Rata Share Per End-Product	Cost Factors	
	Yes	No	Course No.'s, Special Activities, Services, Reports, Etc.					Per Student	Per Contact Hour
5.10 Social and Cultural Development									
5.20 Supplementary Educational Service									
5.30 Counseling and Career Guidance									
5.40 Financial Aid									

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	Participation		End-Products Produced	No. of Individuals Served (i.e. students by course)	Degree of Involvement (% of Time Aver. Week)	Total Salary Level (Including Fringes)	Pro-Rate Share Per End-Product	Cost Factors	
	Yes	No	Course No.'s, Special Activities, Services, Reports, Etc.					Per Student	Per Contact Hours
5.50 Student Support									
6.10 Executive Management									
6.20 Fiscal Operations									
6.30 General Administrative Services									

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	Participation		End-Products Produced	No. of Individuals Served (i.e. students by course)	Degree of Involvement (% of Time Aver. Week)	Total Salary Level (Including Fringe)	Pro-Rata Share Per End-Product	Cost Factors	
	Yes	No	Course No.'s, Special Activities, Services, Reports, Etc.					Per Student	Per Contact Hours
6.40 Logistical Services									
6.50 Physical Plant Operations									
6.60 Faculty and Staff Services									
6.70 Community Relations									

BEST COPY AVAILABLE

	Participation		End-Products Produced	No. of Individuals Served (i.e. students by course)	Degree of Involvement (% of Time Aver. Week)	Total Salary Level (Including Fringes)	Pro-Rata Share Per End-Product	Cost Factors	
	Yes	No	Course No.'s, Special Activities, Services, Reports, Etc.					Per Student	Per Contact Hours
7.10 Institutional Operations									
7.20 Outside Agencies									

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SUB-PROGRAM _____

MAJOR _____ MINOR _____

DEPARTMENT _____

DEGREE _____

INTERVIEWEE _____

INTERVIEWER _____

DATE _____

TIME: FR _____ TO _____

PAGE _____ OF _____

INSTRUCTION PROGRAM PROFILE BY DEGREE AREA

Course and Section Number and Abbr. Title	Level	Pro-Crm Area	No. of Instructors by Rank	Average % of Time	No. of Individuals Currently Served	Average Crs. Demand (Previous Years)	Projected Course Demand (Years)	Average Salary Plus Fringes	Cost Factors (Current Loadings)		
									Per Student	Per Contact Hour	Other Indirect Costs
								Total Costs			

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Control Symbol: VCC Form II

Figure 4-4

DEPARTMENT _____

DISCIPLINE AREA _____

DATE _____

VERIFIED BY _____

STAFF _____ FACULTY _____

POSTED BY _____

Functional Participation (Individual Level)

Programs	Support Level (Percent of time)	Total No. of End-Products	No. of Individuals, Etc. Served	Cost Factors (Salary Plus Fringes)				Program Priorities	Remarks
				By Sub-Program	By Program	Pro-Rata Share of Indirect Costs	Total		
1.0 Instruction									
3.0 Community Service									
4.0 Academic Support									
5.0 Student Service									
6.0 Institutional Support									
7.0 Operations									
Totals	100								

Control Symbol: VCC Form III

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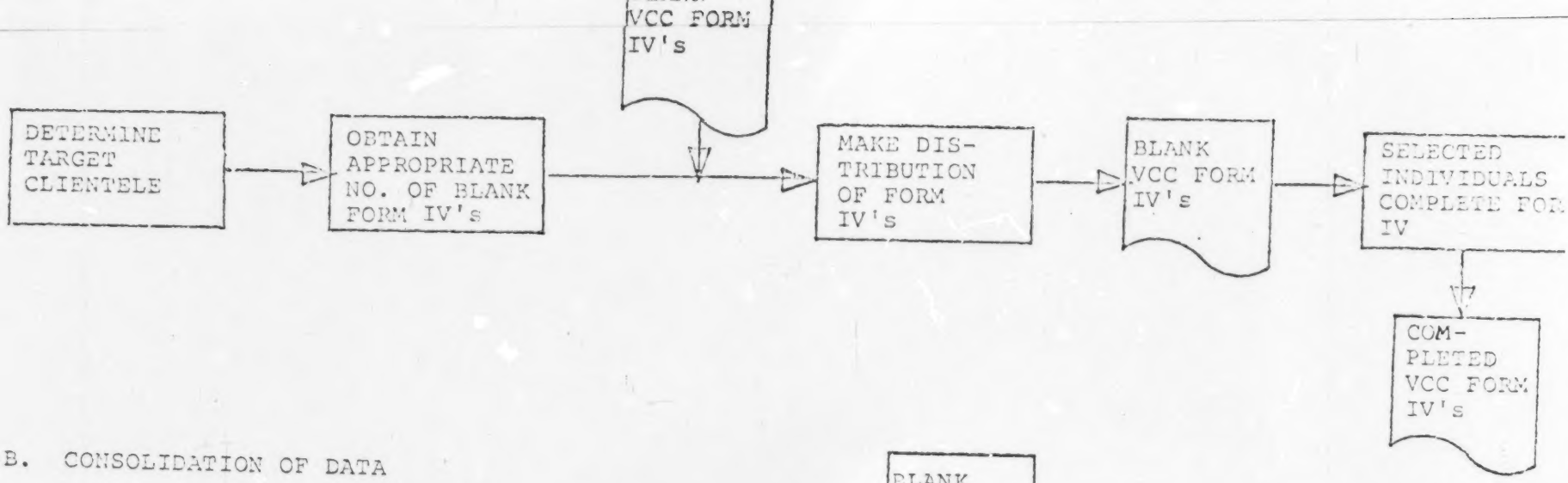
Figure 4-5


VCC FORM IV's
DETERMINE TARGET CLIENTELE
OBTAIN APPROPRIATE NO. OF BLANK FORM IV's
MAKE DIS-TRIBUTION OF FORM IV's
BLANK VCC FORM IV's
SELECTED INDIVIDUALS COMPLETE FORM IV
COM-PLETED VCC FORM IV's

B. CONSOLIDATION OF DATA

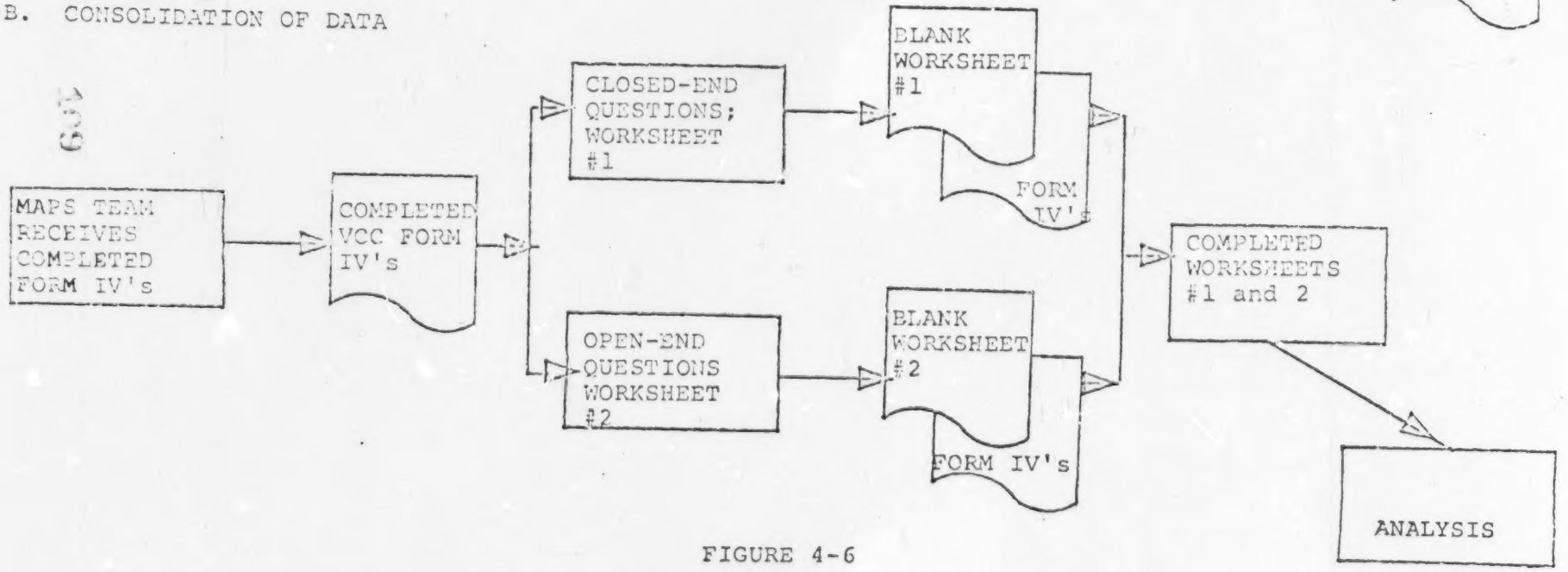


FIGURE 4-6

LEVEL "B" ASSESSMENT

INDIVIDUAL PERCEPTION ANALYSIS

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BASIC UNITS OF WORK

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1. What do you consider to be your primary job? (If there is a secondary, please list it)

_____

_____ _____

_____

2. What target group(s) are you supporting? (show a P-for primary, S-for secondary)

a._____ student b._____faculty

d._____ community c._____staff

3. What do you consider as the major needs for the indicated primary and/or secondary groups? (briefly, i.e. courses, reports, etc.)

(group) (needs)

_____ _____

_____ _____

_____ _____

_____ _____

4. How is a determination of needs for each target group made?

a.____formal investigations b.____informal investigations

c.____recommendations d.____advisory committee

e.____fish-bowl f.____lottery

g.____ observation and judgment

5. What part do you play in the final selection of actions which will meet the needs identified?

a.____ develop work plans b.____make recommendations

c.____ develop directives d.____none

Figure 4-7

VCC Form IV, Part A

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6. What actions are you now taking on plans which will allow you to meet these needs?

(needs) _____

(actions) _____

(needs) _____

(actions) _____

(needs) _____

(actions) _____

7. What is the primary method by which you communicate these actions to peer, coordinating, supervisory, or management personnel?

a.____formal work plans b.____memos

c.____staff meetings d.____word-of-mouth

e.____directives f.____none

8. What administrative controls do you use to determine the status of the actions taken on these needs?

a.____progress reports b.____memos

c.____special reports d.____staff meetings

e.____telephone calls f.____none

9. When completed, what method do you use to evaluate the effectiveness of the actions taken?

a.____survey b.____questionnaire

c.____critique d.____special report

e.____seminars f.____none

10. What method do you use to share among others the "lessons learned" from the evaluation of the performances?

a.____staff meeting b.____in service training

c.____orientations d.____O-j-t

e.____memos f.____none

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1. In consideration of your primary job and the work to be done, do you consider that you now have the assigned personnel to do the work required?

   a.___appropriate b.___less than appropriate

   c.___more than appropriate

2. Considering only the work/needs for which you are responsible, do you regard your organizational placement to be:

   a.___compatible b.___dysfunctional

3. Of the seven functions attributed to higher education, which one(s) do you feel most aptly serve as labels for describing your job? (see taxonomy of terms for clarification of functions)

   a.___instruction b.___organized research

   c.___public service d.___academic support

   e.___student service f.___institutional support

   g.___independent operations

4. In view of your daily tasks, do you consider your job description and/or specifications to be:

   a.___adequate b.___requires review c.___requires change

5. Do you consider your involvement in the identification of needed work and the development of action to accomplish this work to be:

   a.___adequate b.___desire more involvement

   c.___less involvement

VCC Form IV, Part B

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6. Do you function best where: (circle the best answer)

   a. You are given goals and general objectives, but you must devise ways and means to implement these.

   b. You are a part of a larger committee which must determine goals and objectives and recommend ways of implementation.

   c. You are not consulted in the planning but only responsible for the implementation (the doing).

   d. You are encouraged to develop goals and objectives and then help in developing ways and means of implementation.

7. Considering your job and its organizational placement, what is the strongest source of influence that you feel--also the weakest? (S-strong, W-weak)

   a.____Peer group b.____Professional organizations

   c.____College policies d.____Community e.____Students

   f.____College groups

8. Also, what do you consider the weakest of the following in the satisfaction of your recognized needs: (i.e. limiting factors)

   a.____communications b.____needs assessment

   c.____planning d.____policy development

   e.____program evaluation f.____budgeting

9. In order to solve your problems and get "action" do you generally find it more effective to:

   a.____follow the chain of command

   b.____jump your immediate boss and go higher

   c.____go directly to the man, in your opinion, with the answer, wherever he may be

   d.____consult with your peer group first

   e.____go it alone and hope for the best

Part B (Continuation)

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1. To what degree are you involved in the development of the Valencia Community College Budget?

   a.____no input b.____slightly involved c.____ develop staffing level data for my work unit d.____ develop capital expenditure data for my element

   e.____develop other input data f.____finalizing actions

2. Do you feel the monies allocated to your work area are commensurate with the desired level of work activity that will permit the meeting of needs?

   a.____adequate b.____less than adequate

3. Do you feel the budgetary process, as currently employed, lends itself to

   a.____fair competition for scarce resources

   b.____is basically fair; however requires modification

   c.____is unfair

4. Are you generally aware of "budgetary priorities"

   a.____before the budget is prepared

   b.____after your input has been submitted

   c.____after the budget has been approved

   d.____never informed

5. Referring to your previously identified needs and work activities, do you consider the budgetary process to be weakest in its ability to provide you with

   a.____facilities b.____personnel c.____support materials

   d.____travel e.____other (please specify)_____

   _____

VCC Form IV, Part C

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6. What factors cause changes in your work areas budget from one funding cycle to another?

   a.____internal politics b.____college priorities

   c.____state legislature d.____size of organizational elements

   e.____substantive justifications

7. Is there a system by which your work area keeps track of expenses and can relate these to achieved work activities?

   a.____no, Business Office's responsibility

   b.____informal records, not directly related to work activities

   c.____yes

8. To what degree do the needs and needs-related work activities determine the dollar amount requested for your work area?

   a.____no relationship b.____slight impact

   c.____determining factors

Part C (Continuation)

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DECISION MAKING PROCESS

1. Do the decisions that you are called upon to make impact primarily on:

   a.____student b.____staff

   c.____faculty d.____community

2. Will you identify the major type of decisions that you are called upon to make within the above categories?

   _____

   _____

   _____

3. What would you say that the making of these decisions consumes of your time

   a.____less than 10%

   b.____greater than 10% but less than 25%

   c.____greater than 25% but less than 50%

   d.____greater than 50%

4. Is the information or data utilized by you in the above decision(s) considered to be

   a.____adequate b.____less than adequate c.__more than adequate

5. From what source or sources do you draw upon for the necessary information?

   _____

   _____

   _____

VCC Form IV, Part D

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6. What type of information do you require from the above sources?

a.____statistical (Historical) b.____ statistical(Current)

c.____statistical (Projections) d.____ descriptive

e.____other (please specify)_____

_____

7. What frequency of demand is imposed upon your sources for this information?

a.____weekly b.____monthly c.____semi-annual

d.____on demand (approximate times per year____)

8. Would you categorize the majority of your decision-making as aiding

a.____budget process b.____ planning program

c.____management program d.____administrative program

e.____policy making program f.____assessment program

g.____ evaluation program

9. In your opinion do you have the necessary authority to implement and execute the decisions you make without superordinate approval?

a.____no b.____yes(100%) c.____majority (75%)

d.____as a general rule(50%) e.____rarely (25%)

Part D (Continuation)

Worksheet #1---Closed-End Questions

Total No. of Respondents____ Name of Preparing Individual_____

Category of Respondents (A or F)____ Date of Preparation_____

Form IV, Part (Enter A,B,C, or D)____

Question Number____

Question (Write out actual question as it appears on Form IV, Part A,B,C, or D):

1	2								3
LEVEL	SELECTED RESPONSES								UN-ANSWERED
	a	b	c	d	e	f	g	h	
TOTAL									

Figure 4-8

Worksheet #1---Sample Format

(Recommended)

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Worksheet #2---Open-End Questions

NUMBER OF RESPONDENTS____

CATEGORY OF RESPONDENTS____

PREPARED BY_____

DATE PREPARED_____

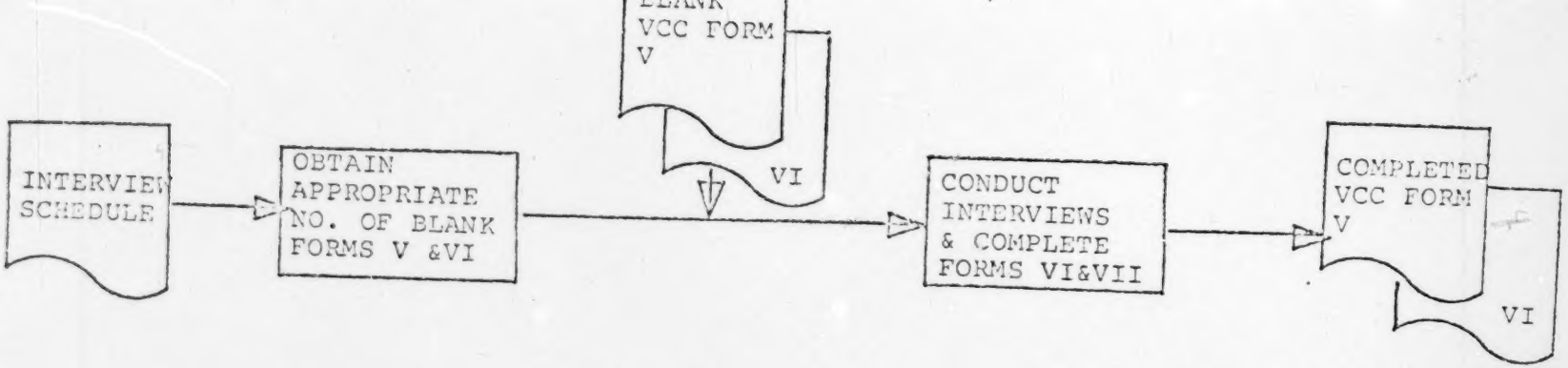
ENTER RESPONSES TO PART A, QUESTIONS 3, 6, AND 1; PART C, QUESTION 5; AND PART D, QUESTIONS 2,5, AND 6. PLEASE FOLLOW INDICATED SEQUENCE.

PART	QUESTION #	RESPONSE (ARRAY IN RANK ORDER)	NUM-BER	PER CENT	LEVEL

Figure 4-9

Worksheet #2---Sample Format

(Recommended)



B. DATA DISPLAY (FLOW DIAGRAMMING)

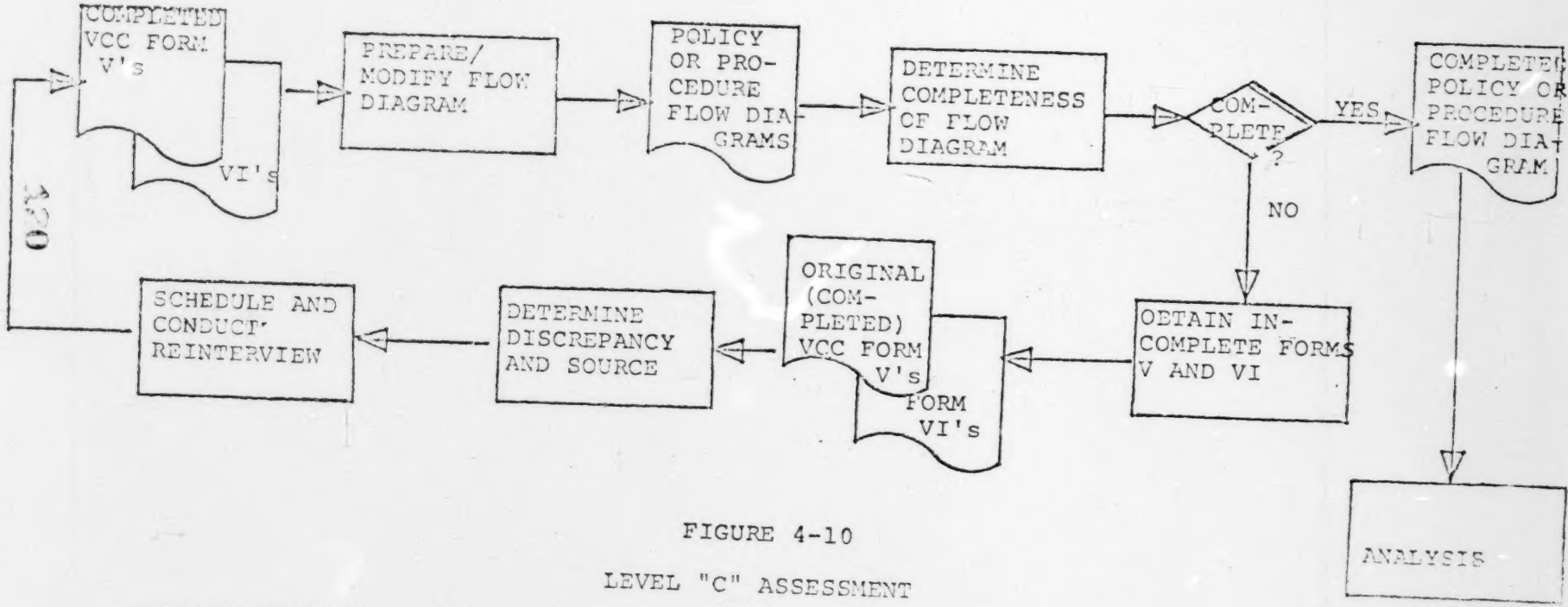


FIGURE 4-10

LEVEL "C" ASSESSMENT

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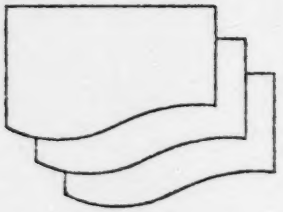
THE SYMBOLIC LANGUAGE OF THE SYSTEMS APPROACH

(Non-ADP Applications)

Source Document or Report



Multiple Forms or Copies

Decision Point

Action Block

Continuation (Same Page)

Manually Maintained File

Direction or Flow

Continuation (To Another Page)

Transmittal Form

Figure 4-11

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SUB-SYSTEM: _____ INTERVIEWEE _____

DIVISION _____ INTERVIEWER _____

DEPARTMENT _____ DATE _____

DISCIPLINE AREA _____ TIME: From _____ To _____

POSTED (Initials) _____ STAFF _____ FACULTY _____

PAGE _____ OF _____

Sub-System Input Data Collection

DATA ITEM 1	DATA ITEM 2	DATA ITEM 3	DATA ITEM 4	DATA ITEM 5	DATA ITEM 6	DATA ITEM 7
Received for Processing and/or Action (Forms, Reports, Memo's, Letters, Verbal Instructions, Standard Procedures, Etc.)	Received From Whom (Name, Title, Organizational Designation)	Received When (on an Average)	Number of Copies Received	What Action do you Initiate as a Result of This Receipted Form, Report, Etc. (For Each Copy Received)	What Information, Data, General Assistance, or Coordination is Required for you to Take This Action	What is the Source of This Data, Information, etc.

Control Symbol: VCC Form V

Figure 4-12

BEST COPY AVAILABLE

SUB-SYSTEM _____

DIVISION _____

DEPARTMENT _____

DISCIPLINE AREA _____

POSTED _____

INTERVIEWEE _____

INTERVIEWOR _____

DATE _____

TIME: From _____ To _____

STAFF _____ FACULTY _____

PAGE _____ OF _____

Sub-System Output Data Collection

DATA ITEM 8	DATA ITEM 9	DATA ITEM 10	DATA ITEM 11	DATA ITEM 12	DATA ITEM 13	DATA ITEM 14
As a Result Your Action in Item 5 What is Produced (Report, Completed Form, Memo, Etc.)?	In How Many Copies?	How Many Times Per Year do you Take This Action	Are Reports, Etc. Reviewed Within Your Organizational Element Prior to Distribution, if so by Whom?	What Guidelines, Assistance, Etc. is Required for Review & Approval	What is The Distribution of Each Copy (To Whom Sent; Name, Title Org. Element)	Approximately When, on the Average, are The Copies Distributed?

Control Symbol: VCC Form VI

Figure 4-13

120

UNIVERSITY OF CALIF.
LOS ANGELES
FEB 14 1975
CLEARINGHOUSE FOR
JUNIOR COLLEGE
INFORMATION

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